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**SELECTED BIVARIATE FREQUENCY TABLES:
U.S. ARMY MEN AND WOMEN**

by

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Yellow Springs, Ohio

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<p>Bivariate tables graphically portray the relationship between two dimensions and have traditionally played an important role in the use of anthropometric data by clothing and workspace designers. Published in this report, for the first time, is a set of bivariate tables in which men's and women's data are presented in comparable form, with the same units, the same interval widths, and the same interval endpoints. This presentation of the data will facilitate the use of the bivariate tables for design problems which involve</p>		

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both men and women. This particular set of bivariates has been selected for the benefit of clothing designers in particular; however, many of them may be applicable to other types of design problems.

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PREFACE

This report was developed in response to the requirements of contract DAAK60-79-C-0097 with the U.S. Army Natick Research and Development Laboratories. Mr. Robert M. White served as contract monitor and played an active role in the selection of the bivariate.

The authors are grateful to Ms. Ilse Tebbetts for carefully organizing the report, to Ms. Jane Reese for utilizing her expertise in preparing the manuscript for publication and to Dr. John T. McConville for his guidance.

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SELECTED BIVARIATE FREQUENCY TABLES:
U.S. ARMY MEN AND WOMEN

INTRODUCTION

Fundamental to the successful design of Army clothing is a working knowledge of the relationships of human body dimensions to one another. While a staggering number of measurement statistics are available, their very abundance may well prove somewhat defeating to the clothing designer faced with the task of designing a variety of clothing for men and women, determining how many sizes will be necessary to accommodate the target population and, finally, determining how many of each garment will be required.

Among the most practical and useful ways of displaying information dealing with the multiplicity of relationships between clothing-related dimensions, and demonstrating at the same time the degree to which they relate to one another through the whole range of the population, are bivariate frequency tables. These tables show the range of any two given dimensions and present a graphic overview of how the subject population distributes itself across that range. They provide a means for deciding how many sizes will be needed depending on the size intervals selected and, once graphically divided into size categories, they show how many garments of each size will have to be provided.

While some bivariate tables for Army men do exist, they are unpublished and not easily accessible to designers. A number of bivariate tables based on Army women's data were published (Churchill, T. et al., 1977)* but they are not comparable or compatible with the few existing men's bivariate tables. Published in this volume for the first time is a set of comparable men's and women's bivariate tables in which identical pairs of variables are used and presented in comparable units. The units used are inches, as opposed to the more traditional metric units for anthropometric data, and the intervals have been selected to be appropriate to designers of clothing and personal-protective individual equipment.**

*Churchill, Thomas, Edmund Churchill, John T. McConville and Robert M. White. 1977. Anthropometry of Women of the U.S. Army--1977, Report No. 3 - Bivariate Frequency Tables, Technical Report NATICK/TR-77/028, U.S. Army Natick Research and Development Command, Natick, Massachusetts. (AD A046 692)

**The problems inherent in the translation of anthropometric data measured in metric units to inch and fractional inch bivariate tables and the resolution of these problems have been described in Churchill, T. et al., 1977.

Use of Bivariate Tables

The anthropometric bivariate table is a tabular method of displaying simultaneously two normally distributed variables on a single table. In Table 1 a typical anthropometric bivariate is shown for the dimensional variables of crotch height and hip circumference. The table is divided vertically and horizontally by lines to create a matrix of cells. On the vertical or Y axis the cells represent hip circumference values, and the numbers on the extreme left of the table designate the beginning and end value of hip circumference for each of the intervals or rows. The numbers on the extreme right of the table designate the number of individuals in each row.

Given on the X or horizontal axis is a similar tabulation for crotch height with the beginning and end points for each column given in intervals of one inch. The figures at the bottom of the table are the column summations for the number of subjects in each of the intervals of crotch height. At the extreme lower right is the summation of the rows and columns which is the total sample size.

The number in each bivariate cell represents the number of subjects who fall within a particular one inch of hip circumference and a particular one inch of crotch height. Thus, it will be seen that 241 individuals out of the 1,330 subjects in the total sample have a hip circumference which falls between 37.0 and 38.0 inches. Some 308 individuals of the total sample have crotch heights which fall within the inch interval 29.0 to 30.0 inches.* Of these individuals, 69 have a hip circumference between 37.0 and 38.0 inches and a crotch height between 29.0 and 30.0 inches.

Below the bivariate tables are two lines of data which give the total sample mean and standard deviation for each variable, as well as the correlation coefficient (R) which expresses the relationship between the variables. Also appearing below the bivariates are regression equations for predicting one variable from a specific value of the other plus their associated standard errors of the estimate. The R value indicates the degree to which the tabulated dimensions correlate with each other; that is, the extent to which changes in one dimension predictably reflect similar changes in the other. On a scale of 0 to 1.0, where 1.0 is a perfect correlation, the .861 correlation between crotch height and stature (Table 24, page 41) is considered high; variables with an R of .5 are thought of as moderately correlated; and $R=.260$, as in Table 1, shows a poor correlation. A quick glance at the pattern of numbers on a bivariate can give an immediate visual clue as to how well the two variables are correlated. Poorly correlated variables show up in a roughly oval pattern (as in Table 1). Well-correlated variables appear in a neat band which usually rises diagonally from left to right

*It would appear from the interval designations that an individual who is exactly 37.0 or 38.0 inches in hip circumference could fall in either of the adjacent columns. In the actual preparation of these tables, the interval is designated as 37.0 through 37.99 inches so that no overlap of interval beginning and end points occur and each individual occupies one and only one position in the table.

TABLE 1

A BIVARIATE FREQUENCY TABLE FOR
CROTCH HEIGHT AND HIP CIRC
1977 ARMY WOMEN

	24.0	25.0	26.0	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	TOTAL
53.0										1					1
52.0															
51.0															
50.0															
49.0									1						1
48.0						1									1
47.0							2								2
46.0							2		1						3
45.0								1	2	2					5
44.0							4	4	4	1					14
43.0							4	5	6	5	2	1			28
42.0							4	10	9	6	3	1	1		48
41.0							1	12	18	20	14	4	3		101
40.0						1	2	4	23	34	37	18	28	6	157
39.0						1	2	14	30	41	42	32	21	8	193
38.0						1	3	22	34	69	48	36	15	9	241
37.0						1	2	7	13	34	59	38	21	13	195
36.0						1	5	25	27	32	39	24	14	2	170
35.0						1	4	8	21	23	19	9	3	1	84
34.0						1	2	12	11	15	5	7	3		55
33.0						1	5	2	9	3	4	1	1		25
32.0						1			3	1	2				6
31.0						1			1						2
30.0						1									
TOTAL	1	7	34	104	218	308	279	190	128	39	18	3	1		1330

HIP CIRC(IN)

CROTCH HEIGHT(IN)

1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
CROTCH HEIGHT	30.07	1.72	0.260	$= (0.181) * \text{HIP CIRC(IN)} + (23.26)$	1.66
HIP CIRC	37.59	2.48	0.260	$= (0.374) * \text{CROTCH HEIGHT(IN)} + (26.35)$	2.39

(see Table 24) reflecting the fact that as one dimension gets bigger the other gets correspondingly bigger at approximately the same rate.

The regression equations which appear under the bivariates enable the reader to make a point estimate for one variable from any given value of the other. The accompanying standard error of estimate is used to construct the range of possible variance of the point estimate. We might, for example, wish to estimate crotch height for a small group of U.S. Army women knowing only that their statures are 67.25 inches. These two dimensions are depicted on Table 24 and the regression equation for predicting crotch height from stature appears below the table as follows:

$$\text{CROTCH HEIGHT} = (.579 \times \text{STATURE}) - 7.08$$

$$\text{STD. ERROR} = .88$$

Plugging in the stature value of 67.25 yields:

$$\text{CROTCH HEIGHT} = (.579 \times 67.25) - 7.08$$

$$\text{CROTCH HEIGHT} = 31.86$$

The best estimate for crotch height for these women is thus 31.86 inches but, as with all statistics, this becomes a probability statement with the use of the standard error of the estimate as follows: for approximately two thirds of the subject women, crotch height values are likely to fall between 31.86 inches minus .88 inches and 31.86 inches plus .88 inches (one standard error of the estimate).

The Survey Samples

Men's bivariate data were obtained from an anthropometric survey conducted in 1965-66 in which a total of 6,682 men were measured at 12 Army posts throughout the U.S. (White and Churchill, 1971).^{*} Some 1,330 subjects were measured at four locations in the women's survey in 1976-77 (Churchill, E. et al., 1977).^{**} Age, rank, and race of both samples are summarized in Table 2 below. The marked difference in sample size between the two surveys (6,682 vs. 1,330) may actually be fortuitous, as the number of women in the U.S. Army is scheduled to be approximately 15 percent of the total -- a ratio which closely approximates the mix found in these tables.

^{*}White, Robert M. and Edmund Churchill. 1971. The Body Size of Soldiers: U.S. Army Anthropometry-1966. Technical Report 72-51-CE, U.S. Army Natick Laboratories, Natick, Massachusetts. (AD 743 465)

^{**}Churchill, Edmund, Thomas Churchill, John T. McConville and Robert M. White. 1977. Anthropometry of Women of the U.S. Army--1977, Report No. 2 - The Basic Univariate Statistics, Technical Report NATICK/TR-77/024, U.S. Army Natick Research and Development Command, Natick, Massachusetts. (AD A044 806)

TABLE 2

DISTRIBUTION OF SAMPLES BY
AGE, RANK AND RACE

<u>Age</u>	<u>No. of Women</u>	<u>No. of Men</u>	<u>% of Women</u>	<u>% of Men</u>
50 and up	3	16	0.2	0.2
40-50	25	78	1.9	1.2
30-40	99	339	7.5	5.1
20-30	810	4,158	60.9	62.2
Under 20	393	2,091	29.5	31.3
TOTAL	1,330	6,682	100.0	100.0

<u>Rank</u>	<u>No. of Women</u>	<u>No. of Men</u>	<u>% of Women</u>	<u>% of Men</u>
Officers	343	85	25.8	1.3
Enlisted	987	6,596	74.2	98.7
NA	---	1	--	--
TOTAL	1,330	6,682	100.0	100.0

<u>Race</u>	<u>No. of Women</u>	<u>No. of Men</u>	<u>% of Women</u>	<u>% of Men</u>
White	988	5,509	74.3	82.4
Black	302	973	22.7	14.6
Oriental	25	46	1.9	0.7
Other	--	125	--	1.9
NA	15	29	1.1	0.4
TOTAL	1,330	6,682	100.0	100.0

The Bivariate Tables

Section I contains, on facing pages, a series of 41 comparable male and female bivariate tables displaying identical pairs of clothing-related variables. Data were generated from the Army men's and women's surveys described above and measurement techniques were studied to assure that paired tables do, in fact, represent comparable dimensions.

Some half-dozen dimensions considered important in clothing design were found to have been defined or measured differently in the two surveys. They include interscye back, neck circumference, vertical trunk circumference, waist back, waist circumference and waist height. Bivariate tables in which any of these variables appear are given in Section II for men and for women; they are usable individually but not comparable for combining purposes.

Section III contains a few bivariate tables which include dimensions measured only in one of the two surveys but not in the other, thus providing only men's data or only women's data for that particular measurement. These variables

include ankle height, crotch length, sleeve length, sleeve outseam, sphyrion height, and waist front. They are included because they are considered sufficiently useful for specific purposes even if limited to one sex.

Section IV contains a series of double bivariates combining the data which appear as separate men's and women's tabulations in Section I. This has the effect of closely pairing men's and women's measurements into one set of data for a more graphically visible presentation of the possibilities and problems involved in devising a combined sizing program for both men and women.

These combined bivariate tables differ from the single bivariates in that we find two entries separated by a diagonal line in each of the bivariate cells. Referring to Table 143 (page 165) for example (crotch height and hip circumference), we see the entry for the cell 39.0-40.0 inches for hip circumference and 30.0-31.0 inches for crotch height given as 47/37. The number of Army males who fall within this interval is 47 and the number of females is 37. The male entry is always on the left of the diagonal and the female entry is on the right. This placement is true for the row, column, and total summations as well.

Abbreviated descriptions of the measuring techniques used in obtaining these data are given in the Appendix. Also appearing at the conclusion of the report is an index locating all the variables used in these bivariate tables.

SECTION I

Paired Male and Female Bivariates;
Dimensions Comparable

A BIVARIATE FREQUENCY TABLE FOR
BUST/CHEST CIRC AND BICEPS CIRC
1966 ARMY MEN

1966 ARMY MEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
BUST/CHEST CIRC	36.92	2.63	0.754	$= (1.833) * \text{BICEPS CIRC}(\text{IN}) + (13.63)$	1.73
BICEPS CIRC	12.70	1.08	0.754	$= (0.310) * \text{BUST/CHEST CIRC}(\text{IN}) + (1.26)$	0.71

TABLE 4

A BIVARIATE FREQUENCY TABLE FOR
BUST/CHEST CIRC AND BICEPS CIRC
1977 ARMY WOMEN

BUST/CHEST CIRC(IN)																											TOTAL	
27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0	54.0	55.0
15.0																1												1
14.5																												
14.0																												
13.5												1			1					1								3
13.0												2			2													8
12.5												3			1													14
12.0								2	5	11	8	11	6	3	5	1					1							53
11.5			1			2	4	6	23	20	14	14	8	4	1	1												98
11.0				3	10	19	35	35	50	54	26	22	11	2	1													233
10.5					7	35	50	58	78	47	21	11	3															310
10.0			2	1	19	53	47	54	43	16	18	1																254
9.5			4	22	41	44	52	29	17	4	2	1																216
9.0		1	1	19	29	21	15	7	1																			95
8.5		2	1	12	6	11	5	2																				39
8.0		1	1	1		3																						6
TOTAL	1	3	9	56	105	179	192	193	217	154	93	65	32	11	11	5			2	1	1							1330

TABLE 5

A BIVARIATE FREQUENCY TABLE FOR
BUST/CHEST CIRC AND HIP CIRC
1966 ARMY MEN

	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	48.0	49.0	TOTAL
53.0																						1	1
52.0																							
51.0																							
50.0																			1				
49.0																				1			2
48.0																				1			1
47.0																				1			5
46.0																				1			7
45.0																				2			14
44.0																				4			40
43.0																				1			70
42.0																				3			122
41.0																				5			188
40.0																				4			339
39.0																				1			671
38.0																				3			785
37.0																				2			1036
36.0																				1			1113
35.0																							1113
34.0																							720
33.0																							360
32.0																							137
31.0																							34
30.0																							4
TOTAL	1	1	15	63	217	478	795	1111	1052	911	712	518	339	186	130	70	33	22	11	13	4		6882

HIP CIRC(IN)

1966 ARMY MEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

BUST/CHEST CIRC 36.92 2.63 0.797 = (0.853)*HIP CIRC(IN)+(5.28) 1.59

HIP CIRC 37.09 2.46 0.797 = (0.745)*BUST/CHEST CIRC(IN)+(9.59) 1.48

TABLE 6

A BIVARIATE FREQUENCY TABLE FOR
BUST/CHEST CIRC AND HIP CIRC
1977 ARMY WOMEN

	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	TOTAL
HIP CIRC(IN)	53.0																1					1
52.0																						
51.0																						
50.0																						
49.0																						
48.0																				1		1
47.0													1			1						1
46.0														1		2						2
45.0												2	1	1			1					3
44.0												1	4	1		1						5
43.0										1	3	1	10	1	2	2						14
42.0										1	4	7	10	7	1	3			1			28
41.0				1						1	1	19	18	18	1	3						46
40.0										1	1	9	18	17	4	1						101
39.0						1	11	18	22	36	36	36	36	17	9	1						157
38.0						2	6	21	40	55	29	21	9	9	1							193
37.0					1	9	39	35	43	57	37	10	6	3	1							241
36.0					1	6	18	36	48	38	23	15	5	6								195
35.0					4	8	28	36	45	31	15	1	2	1								170
34.0					1	12	23	25	13	4	3	1										84
33.0			1	1	16	19	16	2														55
32.0			2	1	10	4	7	1	1													25
31.0				1	2	1	1															6
30.0					1		1															2
TOTAL	1	3	9	56	105	179	192	193	217	154	93	65	32	11	11	5			2	1	1	1330

HIP CIRC(IN)

1977 ARMY WOMEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

BUST/CHEST CIRC 34.72 2.49 0.707 = (0.711)*HIP CIRC(IN)+(7.99) 1.76

HIP CIRC 37.59 2.48 0.707 = (0.703)*BUST/CHEST CIRC(IN)+(13.19) 1.75

TABLE 7

A BIVARIATE FREQUENCY TABLE FOR
BUST/CHEST CIRC AND SCYE CIRC
1966 ARMY MEN

	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	48.0	49.0	TOTAL
23.5														1					1				2
23.0											1												2
22.5											1												2
22.0											2			2		2	4	1	1	1	3		17
21.5											2			6	3	1	1		2	1	2	1	20
21.0									5	1	2		6	4	8	6	6	4	2	2	2	1	49
20.5								1	2	1	8	1	8	1	5	8	9	3	3	2	3		55
20.0								1	4	1	6	15	24	17	16	14	13	2	3	1	1	1	118
19.5								4	2	14	22	32	41	36	26	25	10	6					219
19.0								10	16	29	41	69	54	67	30	19	4	6	5	2	1		345
18.5								17	35	62	104	98	94	66	42	24	10	4	2				568
18.0								5	38	75	119	149	165	109	61	29	11	8	4	1	1		776
17.5								6	25	82	184	217	208	143	93	45	20	16	4				1048
17.0								4	18	62	168	267	268	185	109	45	25	3	1	1			1137
16.5								2	33	107	167	238	197	97	51	31	4	1					930
16.0								1	12	50	110	162	177	111	62	27	6	2					722
15.5								4	18	53	102	115	80	24	11	8	4						422
15.0								2	11	32	45	26	22	11	8	7	1						166
14.5								1	3	8	13	9	7	6	2								53
14.0								3	3	3	3	6	3		1								24
13.5								1				1	1										5
13.0											1	1	1										4
12.5																							1
TOTAL	1	1	15	63	217	478	795	1111	1062	911	712	618	339	186	130	70	33	22	11	13	4		6882

SCYE CIRC(IN)

1966 ARMY MEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

BUST/CHEST CIRC 36.92 2.63 0.665 = (1.364)*SCYE CIRC(IN)+(12.99) 1.97

SCYE CIRC 17.54 1.28 0.665 = (0.325)*BUST/CHEST CIRC(IN)+(5.55) 0.96

TABLE 8

A BIVARIATE FREQUENCY TABLE FOR
BUST/CHEST CIRC AND SCYE CIRC
1977 ARMY WOMEN

SCYE CIRC(IN)	BUST/CHEST CIRC(IN)																				TOTAL
	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0
19.0																1			1		1
18.5													1			2	1				4
18.0												1	4	2	4	1	1			1	6
17.5											1	1	3	7	1	3	1		1		15
17.0									1	1	3	3	3	9	3	3					24
16.5									1	13	17	11	16	8	2	1					73
16.0						1	2	7	19	36	27	27	17	6							147
15.5						2	13	21	36	67	55	29	16	1							244
15.0						11	15	39	44	60	56	31	6								266
14.5						7	21	59	66	82	40	16	7	3							272
14.0						1	7	42	44	45	23	3	4	1	1						184
13.5						2	3	16	21	15	8	1									70
13.0						1	23	21	15	6											21
12.5						1	3	8	3												3
12.0						1	1														1
11.5																					
TOTAL	1	3	9	56	105	179	192	193	217	164	93	65	32	11	11	6			2	1	1330

STD ERROR

1.63

0.62

REGRESSION EQUATIONS

$$R = (2.005) * SCYE CIRC(IN) + (5.11)$$

$$= 12.005 * SCYE CIRC(IN) + (5.11)$$

$$= (0.287) * BUST/CHEST CIRC(IN) + (4.80)$$

ST DEV

2.49

0.94

MEAN

34.72

14.77

1977 ARMY WOMEN

BUST/CHEST CIRC

SCYE CIRC

TABLE 9

A BIVARIATE FREQUENCY TABLE FOR
BUST/CHEST CIRC AND SHOULDER CIRC
1966 ARMY MEN

	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	48.0	49.0	TOTAL
SHOULDER CIRC(IN)																							
57.0																							3
56.0																				1			1
55.0																1				2	4		7
54.0																	3		3	2	1		9
53.0															1		4	4	1	1	5	1	17
52.0															8		15	6	7	1			49
51.0													6	9	16	22	12	8	5		2		80
50.0											2		17	39	31	30	12	5	2	2			140
49.0													80	80	51	32	15	5	2	2			290
48.0									1	3			88	51	24	6		4	2				464
47.0													67	20	7								686
46.0													94	39	3	3		1					935
45.0													38	10	4	2	3						1132
44.0													16	3	1	1							1036
43.0													35	16									829
42.0													10	2	1								670
41.0													3	1									280
40.0													1										108
39.0																							38
38.0																							6
37.0																							3
36.0																							
TOTAL	1	1	15	63	217	478	795	1111	1052	911	712	519	339	186	130	70	33	22	11	13	4		6882

1966 ARMY MEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
BUST/CHEST CIRC	36.92	2.63	0.855	$= (0.895) * \text{SHOULDER CIRC}(\text{IN}) + (-2.96)$	1.37
SHOULDER CIRC	44.55	2.51	0.855	$= (0.816) * \text{BUST/CHEST CIRC}(\text{IN}) + (14.43)$	1.31

TABLE 10

A BIVARIATE FREQUENCY TABLE FOR
BUST/CHEST CIRC AND SHOULDER CIRC
1977 ARMY WOMEN

	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	TOTAL
SHOULDER CIRC(IN)	49.0																1			1		2
48.0																				1		2
47.0																						2
46.0												1				1						3
45.0											1	1			2							7
44.0											1	2			2							8
43.0									1	3	6	13			7				1			50
42.0								1	3	14	23	24	15	10	2							92
41.0							1	7	14	36	42	24	20	7	1							152
40.0						1	9	18	41	69	42	22	11	6								209
39.0					1	2	24	50	61	65	29	13	2		1							246
38.0					4	22	48	58	40	34	11	2										219
37.0					2	10	42	66	44	31	5											200
36.0			2	4	14	29	23	14	2	1												89
35.0			2	22	9	6																39
34.0	1	1	1	4		2																9
33.0					1																	1
TOTAL	1	3	9	56	105	179	192	193	217	154	93	65	32	11	11	5			2	1	1	1330

BUST/CHEST CIRC(IN)

1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
BUST/CHEST CIRC	34.72	2.49	0.823	$= (0.973) * \text{SHOULDER CIRC}(\text{IN}) + (-3.73)$	1.42
SHOULDER CIRC	39.51	2.11	0.823	$= (0.695) * \text{BUST/CHEST CIRC}(\text{IN}) + (15.38)$	1.20

TABLE 11

A BIVARIATE FREQUENCY TABLE FOR
BUST/CHEST CIRC AND SHOULDER LTH
1966 ARMY MEN

	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	48.0	49.0	TOTAL
10.0															1								1
9.5											2	2				1						1	6
9.0								1	1	2	2	2	1						1				11
8.5											4	4											37
8.0							1		1	6	9	7	5										451
7.5						8	16	39	52	76	57	71	47	29	22	14	14	1	2	2	1		1
7.0					4	14	35	89	123	165	134	106	84	54	28	18	10	7	7	2	2		882
6.5				2	10	39	102	151	260	250	248	163	122	72	50	35	14	9	4	2	5	1	1539
6.0				3	19	67	143	247	364	281	256	196	146	92	36	23	16	6	6	1	3		1905
5.5				5	13	61	101	141	160	141	104	74	54	41	21	15	7	6	1	3	1		940
5.0				1	10	20	41	67	91	81	65	60	31	30	14	12	8	3	1	1			537
4.5				3	5	5	30	41	51	37	27	27	24	10	8		1				1		280
4.0				1	2	3	8	15	18	12	9	7	3	5		2							85
3.5								4		1			2										7
3.0																							1
TOTAL	1	1	15	63	217	478	785	1111	1052	911	712	518	339	196	130	70	33	22	11	13	4		6682

SHOULDER LTH(IN)

1966 ARMY MEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

BUST/CHEST CIRC 36.92 2.63 0.153 = (0.516)*BUST/CHEST CIRC(IN)+(33.62) 2.60

SHOULDER LTH 6.38 0.78 0.153 = (0.045)*BUST/CHEST CIRC(IN)+(4.72) 0.77

TABLE 12.

A BIVARIATE FREQUENCY TABLE FOR
BUST/CHEST CIRC AND SHOULDER LTH
1977 ARMY WOMEN

		BUST/CHEST CIRC(IN)																				TOTAL
		27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	
7.5					1	1	1	2		1	5	1	1		1							13
7.0					1	7	7	7	17	18	13	6	5				3					85
6.5									60	69	60	39	22		9		1					425
6.0	1		1	11	25	49	68	88	80	96	105	61	39	29	15	5	4		1			604
5.5	2		5	27	48	80	87	96	80	87	96	61	39	29	15	5	4		1			184
5.0			3	14	22	35	26	19	22	15	8	8	7	2	1	2	1		1			19
4.5				2	3	7	2	2	2	2					1							
TOTAL	1	3	9	56	105	179	192	193	217	164	93	65	32	11	11	5			2	1	1	1330

TABLE 13

A BIVARIATE FREQUENCY TABLE FOR
BUST/CHEST CIRC AND SLEEVE INSEAM
1966 ARMY MEN

	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	48.0	49.0	TOTAL
24.0											1						1						1
23.5						1				2	1	1				2							2
23.0							1			3	5	4	3	1	2	2							8
22.5						3	1	2	2	10	6	8	6	5	4	2	2						25
22.0							1	2	11	10	25	30	19	16	10	6	3	2	1				60
21.5						1	6	20	7	22	57	48	39	20	19	10	7	4	1	1	2		168
21.0					1	10	11	32	60	60	90	61	51	46	25	20	13	3	5	3	5	1	382
20.5				1	5	23	41	68	111	120	153	100	98	64	30	22	11	8	4	1	1	1	692
20.0					6	28	60	132	172	174	175	151	101	66	34	24	9	8	3	2	4	1	1064
19.5				2	8	27	85	153	168	205	176	131	88	56	27	22	11	3	5	3	2	1	1226
19.0				2	14	50	103	164	244	203	170	131	86	54	30	17	9	7	2	1	1	1	1299
18.5	1			3	10	26	77	94	154	122	106	86	54	30	17	9	7	2	1	1	1	1	799
18.0				1	2	8	20	51	71	107	78	51	38	25	12	7	5	2	1				555
17.5				3	5	21	23	29	57	36	35	22	16	7	4	2	1	1					262
17.0				1	3	4	15	22	12	14	8	10	4	2	1	2							98
16.5				1	2		1	5	5	1	1	7	1						1				26
16.0					1	3	2	1	1	2	2	2							1				15
15.5																							
TOTAL	1	1	15	63	217	478	795	1111	1052	911	712	518	339	186	130	70	33	22	11	13	4		6682

SLEEVE INSEAM(IN)

1966 ARMY MEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

BUST/CHEST CIRC 36.92 2.63 0.164 = (0.409)*SLEEVE INSEAM(IN)+(29.09) 2.60

SLEEVE INSEAM 19.13 1.05 0.164 = (0.066)*BUST/CHEST CIRC(IN)+(16.69) 1.04

TABLE 14

A BIVARIATE FREQUENCY TABLE FOR
BUST/CHEST CIRC AND SLEEVE INSEAM
1977 ARMY WOMEN

	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	TOTAL
21.5							1	1														2
21.0							2		2			2	1									7
20.5					1	1	1		1	3	3	3	2			2						17
20.0						6	3	4	5	7	5	3	1									34
19.5					3	3	7	16	12	23	15	6	7								1	97
19.0						11	14	18	29	32	16	15	10			1						156
18.5					3	16	17	37	33	23	28	9	12	9	1	1						190
18.0					7	19	44	35	35	41	34	20	12	5	3	1	2					263
17.5					18	22	29	43	35	42	21	14	7	5	3	4						247
17.0					2	12	14	28	25	22	23	10	4	4	1							166
16.5					1	7	9	23	10	13	15	8	5	3		3						103
16.0					1	1	4	10	3	6	4	3	2	1								38
15.5										2		2	1									5
15.0										1	1	1	1									4
14.5																						1
14.0																						
TOTAL	1	3	9	56	105	179	192	193	217	154	93	65	32	11	11	5		2	1	1		1330

SLEEVE INSEAM(IN)

BUST/CHEST CIRC(IN)

1977 ARMY WOMEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

BUST/CHEST CIRC 34.72 2.49 0.120 = (0.291)*SLEEVE INSEAM(IN)+(29.56) 2.48

SLEEVE INSEAM 17.74 1.03 0.120 = (0.050)*BUST/CHEST CIRC(IN)+(16.00) 1.02

TABLE 15

A BIVARIATE FREQUENCY TABLE FOR
BUST/CHEST CIRC AND WEIGHT
1966 ARMY MEN

	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	48.0	49.0	TOTAL
280.0																						1	1
276.0																							
270.0																				1	1	1	3
266.0																				1	1	1	1
260.0																				1	2	1	4
256.0																			1				1
250.0															1	1	1	2					7
246.0														1		2	2	3					9
240.0															1	2	3	1		2			11
236.0															2	4	5	3	1	3	1		19
230.0															1	2	3	2	2				13
226.0															1	2	3	2	2	2	1		21
220.0															4	7	7	6	1	2			43
216.0															3	2	8	5	4				57
210.0															1	2	9	3	2				71
206.0															1	4	19	7	3				98
200.0															2	6	24	10	4	1			121
196.0															9	24	35	4	3	1			161
190.0								2							2	15	57	5	1				200
186.0									1	13	28	62	66	39	21	11	5						245
180.0									8	30	68	70	73	46	10	7	1						313
176.0						1		1	10	56	101	95	70	28	12	3	1						378
170.0							1	8	38	100	106	92	58	24	6	1	2						434
166.0						1	5	21	81	126	154	102	41	18	2	1							552
160.0						3	5	34	117	171	134	81	32	6	1								584
156.0																							660
150.0					2																		630
146.0						11	38	117	195	141	86	32	9	3									531
140.0					1	11	49	118	193	114	42	6	1										518
136.0					3	23	63	157	147	72	23	8	1	1									363
130.0					5	35	95	117	79	27	4	1											267
126.0					10	43	84	79	42	6	3												185
120.0					3	10	42	66	42	18	3	1											95
116.0					5	12	33	23	16	3	3												28
110.0					8	7	8	2	1														22
106.0					2	8	5	2															10
100.0					1	4	3																3
96.0					1	1	1																
TOTAL	1	1	15	63	217	478	794	1110	1051	909	712	518	339	186	130	70	33	22	11	13	4		6677

WEIGHT(LB)

1966 ARMY MEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

BUST/CHEST CIRC 36.92 2.63 0.849 = (0.096)*WEIGHT(LB)+(21.64) 1.39

WEIGHT 159.10 23.35 0.849 = (7.531)*BUST/CHEST CIRC(IN)+(-118.92) 12.33

TABLE 16

A BIVARIATE FREQUENCY TABLE FOR
BUST/CHEST CIRC AND WEIGHT
1977 ARMY WOMEN

BUST/CHEST CIRC(IN)																						
27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	TOTAL	
220.0															1						1	
215.0																			1		1	
210.0																		1			1	
205.0																		1			2	
200.0															1						1	
195.0														2	2			1			5	
190.0																						
185.0											2	3	1		2						8	
180.0											2	2	3	1		2					10	
175.0											1	2	4		1						9	
170.0											2	4	3	1	2	2					16	
165.0											4	8	5	8	3	1	1				30	
160.0											2	12	11	10	7	2	2				58	
155.0											3	2	14	13	9	5	2				62	
150.0											1	5	10	23	15	7	4	1			97	
145.0											2	5	14	18	36	8	4				114	
140.0											2	19	25	51	23	4	4				136	
135.0											3	14	18	36	23	7	4				142	
130.0											1	6	24	34	30	24	2				138	
125.0											4	16	26	43	39	17	2				157	
120.0											2	11	21	27	25	8	1				94	
115.0											1	9	19	21	11						95	
110.0											1	13	17	13							63	
105.0											2	2	9	6	1						45	
100.0											1	2	5								30	
95.0											1	2	3								11	
90.0																						
85.0																					4	
TOTAL	1	3	9	56	105	179	192	193	217	154	93	65	32	11	11	5		2	1	1	1330	

1977 ARMY WOMEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

BUST/CHEST CIRC 34.72 2.49 0.808 = (0.107)*WEIGHT(LB)+(20.58) 1.47

WEIGHT 132.11 18.76 0.808 = (6.081)*BUST/CHEST CIRC(IN)+(-79.01) 11.04

TABLE 17

A BIVARIATE FREQUENCY TABLE FOR
BUST/CHEST CIRC AND WRIST CIRC
1966 ARMY MEN

	28.00	29.00	30.00	31.00	32.00	33.00	34.00	35.00	36.00	37.00	38.00	39.00	40.00	41.00	42.00	43.00	44.00	45.00	46.00	47.00	48.00	49.00	TOTAL
8.75																							1
8.50																							1
8.25																							3
8.00										1		1							1				1
7.75										2	2	3	5	2	1	1		2					20
7.50								3	4	6	8	9	11	16	16	7	7	4		2	3	1	99
7.25										9	29	41	33	39	34	21	17	16	9	2	2		266
7.00										136	137	180	135	88	55	45	27	10	6	8	5	2	985
6.75										271	276	230	172	108	47	38	9	8	3				1657
6.50										318	272	162	97	68	32	15	7	3	3				1721
6.25										298	235	142	95	26	12	7	4						1439
6.00										84	50	29	19	7	2	2							406
5.75										9	5	4		2									97
5.50																							5
5.25																							3
TOTAL	1	1	15	63	217	476	795	1111	1052	911	712	518	339	186	130	70	33	22	11	13	4		6682

WRIST CIRC(IN)

1966 ARMY MEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR
 BUST/CHEST CIRC 36.92 2.63 0.497 = (3.794)WRIST CIRC(IN)+(11.44) 2.28
 WRIST CIRC 6.72 0.34 0.497 = (0.065)BUST/CHEST CIRC(IN)+(4.32) 0.30

TABLE 18

A BIVARIATE FREQUENCY TABLE FOR
BUST/CHEST CIRC AND WRIST CIRC
1977 ARMY WOMEN

BUST/CHEST CIRC(IN)																									
27.00	28.00	29.00	30.00	31.00	32.00	33.00	34.00	35.00	36.00	37.00	38.00	39.00	40.00	41.00	42.00	43.00	44.00	45.00	46.00	47.00	TOTAL				
6.75							1		1	2	3					1			1		9				
6.50						2	2	4	14	16	6	5	1	4	3	2		1			60				
6.25				1	2	16	23	26	44	30	22	19	10	5	3	2		1		1	205				
6.00						39	65	68	92	58	36	25	13	2	3						422				
5.75			1	3	19	39	78	84	72	61	47	23	12	7	2						452				
5.50			4	27	45	84	78	72	51	47	23	12	7								167				
5.25	1	2	3	18	33	34	21	22	13	3	2	4	1								25				
5.00		1	1	7	6	4	2	1	2		1														
TOTAL	1	3	9	56	106	179	192	193	217	154	93	65	32	11	11	5		2	1	1	1330				

STD ERROR

2.19

0.24

REGRESSION EQUATIONS

 $BUST/CHEST CIRC(IN) = (4.452) + (8.95) WRIST CIRC(IN)$ $BUST/CHEST CIRC(IN) = (0.051) + (4.02) WRIST CIRC(IN)$

ST DEV

2.49

0.27

1977 ARMY WOMEN

MEAN

34.72

BUST/CHEST CIRC

5.79

WRIST CIRC

TABLE 19

A BIVARIATE FREQUENCY TABLE FOR
CROTCH HEIGHT AND ANKLE CIRC
1966 ARMY MEN

		CROTCH HEIGHT(IN)																ANKLE CIRC(IN)	TOTAL
		25.00	26.00	27.00	28.00	29.00	30.00	31.00	32.00	33.00	34.00	35.00	36.00	37.00	38.00	39.00	40.00		
12.00					1							1						2	
11.75																			
11.50																			
11.25																			
11.00								1	5			1	3	1				11	
10.75								2	4	6		5	4	2	1			30	
10.50							1	3	15	18		12	12	5	2			72	
10.25							2	21	27	40		26	15	17	7			177	
10.00							1	7	35	66	41	47	30	14	7	1		260	
9.75			2				3	32	59	96	88	85	62	24	16	2		463	
9.50								60	111	188	195	148	97	42	14	2		888	
9.25							2	25	60	204	206	147	105	48	21	8	1	984	
9.00	1						3	92	167	235	266	195	95	40	14	2		1137	
8.75							3	42	111	192	249	180	92	33	8	2	1	1201	
8.50							6	26	51	126	172	141	85	20	2			695	
8.25							3	13	21	64	81	61	25	8	2			497	
8.00							1	3	33	33	41	24	13	3	2			210	
7.75									9	6	11	4	1	1				42	
7.50									2	3	2							10	
7.25									1									3	
7.00																			
TOTAL		1	5	22	77	198	545	990	1451	1391	1020	609	256	94	17	6		6682	

ANKLE CIRC(IN)

1966 ARMY MEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

CROTCH HEIGHT 33.05 1.84 0.162 = (0.527)*ANKLE CIRC(IN)+(28.34) 1.82

ANKLE CIRC 8.93 0.57 0.162 = (0.050)*CROTCH HEIGHT(IN)+(7.28) 0.56

TABLE 20
A BIVARIATE FREQUENCY TABLE FOR
CROTCH HEIGHT AND ANKLE CIRC
1977 ARMY WOMEN

		CROTCH HEIGHT(IN)																TOTAL
		24.00	25.00	26.00	27.00	28.00	29.00	30.00	31.00	32.00	33.00	34.00	35.00	36.00	37.00	38.00	39.00	
ANKLE CIRC(IN)	10.00						1	1	2	1								1
	9.75						2	3	6	4	2		1					4
	9.50					1	6	5	10	7	3	2	2					19
	9.25				1	1	8	23	20	17	21	8	1					37
	9.00				3	1	8	23	20	17	21	8	1		1			103
	8.75																	188
	8.50	1		2	2	8	19	47	34	23	26	5		1				232
	8.25			1	3	16	35	49	52	31	26	13	6					242
	8.00			1	6	21	41	46	49	47	21	4	4	2				273
	7.75			1	5	19	55	74	59	33	19	6	2					134
	7.50			1	5	17	27	38	26	15	3	1	2					72
	7.25				3	13	15	10	18	6	6							37
	7.00			1	4	5	6	10	4	6	1							6
	6.75					2	3	1										2
	6.50																	
TOTAL		1	7	34	104	218	308	279	190	128	39	18	3	1				1330

1977 ARMY WOMEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR
CROTCH HEIGHT 30.07 1.72 0.231 = (0.812)*ANKLE CIRC(IN)+(23.44) 1.68
ANKLE CIRC 8.16 0.49 0.231 = (0.066)*CROTCH HEIGHT(IN)+(6.18) 0.48

TABLE 21

A BIVARIATE FREQUENCY TABLE FOR
CROTCH HEIGHT AND HIP CIRC
1966 ARMY MEN

		CROTCH HEIGHT (IN)																		
	25.0	26.0	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	TOTAL			
53.0				1													1			
52.0																				
51.0																				
50.0																				
49.0						1					1						2			
48.0					1												1			
47.0						1					1		1				5			
46.0	1								2	1	4	1	1				7			
45.0						1	2	6	3			1		1			14			
44.0			1			3	4	8	8	5	5		4	2			40			
43.0					1	3	6	17	14	12	12		3	2			70			
42.0			1		5	13	15	30	22	15	8		5	3	1		122			
41.0					1	9	14	21	37	31	39	20	12	4			188			
40.0					4	8	28	41	70	80	57	34	25	9	2	1	339			
39.0					10	13	47	83	116	113	91	58	30	9	1		671			
38.0			3	3	6	22	45	114	172	160	131	80	35	11	2	1	785			
37.0				6	5	39	89	155	225	209	154	99	35	15	4	1	1036			
36.0				2	12	19	78	160	242	244	184	110	40	17	3	2	1113			
35.0			1	4	7	29	76	185	233	250	170	100	38	15	4	1	1113			
34.0			1	3	10	23	66	110	168	169	99	45	20	6			720			
33.0				1	10	15	40	67	89	80	44	27	7				380			
32.0				1	6	6	31	22	30	20	13	8					137			
31.0						9	9	5	7	3	1						34			
30.0									1	3							4			
TOTAL	1	5	22	77	198	545	990	1451	1391	1020	609	256	94	17	6		6682			

HIP CIRC (IN)

1966 ARMY MEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
CROTCH HEIGHT	33.05	1.84	0.097	$= (0.072) \times \text{HIP CIRC (IN)} + (30.38)$	1.83
HIP CIRC	37.09	2.46	0.097	$= (0.129) \times \text{CROTCH HEIGHT (IN)} + (32.83)$	2.45

TABLE 22

A BIVARIATE FREQUENCY TABLE FOR
CROTCH HEIGHT AND HIP CIRC
1977 ARMY WOMEN

	24.0	25.0	26.0	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	TOTAL
HIP CIRC(IN)	53.0								1						1
	52.0														
	51.0														
	50.0														
	49.0								1						1
	48.0														1
	47.0						1								2
	46.0							2		1					3
	45.0							1	2	2					5
	44.0							4	4	1					14
	43.0							5	6	5	2	1			28
	42.0							10	9	6	3	1	1		46
	41.0							28	20	14	4	3			101
	40.0		1	2	1	12	18	37	18	26	6	3		1	157
	39.0			2	14	30	41	42	32	21	8	2	1		193
	38.0			3	22	34	69	48	38	16	9	3	1		241
	37.0	1	2	7	13	34	59	38	21	13	4	3			195
	36.0		1	5	25	27	32	39	24	14	2	1			170
	35.0			4	8	21	23	13	9	3	1				64
	34.0			2	12	11	15	6	7	3					55
	33.0			5	2	9	3	4	1	1					25
	32.0					3	1	2							6
	31.0							1							2
	30.0														
TOTAL	1	7	34	104	216	308	279	190	126	39	18	3	1		1330

CROTCH HEIGHT(IN)

HIP CIRC(IN)

1977 ARMY WOMEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

CROTCH HEIGHT 30.07 1.72 0.260 = (0.181)*HIP CIRC(IN)+(23.26) 1.66

HIP CIRC 37.59 2.48 0.260 = (0.374)*CROTCH HEIGHT(IN)+(26.35) 2.39

TABLE 23

A BIVARIATE FREQUENCY TABLE FOR
CROTCH HEIGHT AND STATURE
1966 ARMY MEN

CROTCH HEIGHT(IN)																		
25.0	26.0	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	TOTAL		
79.0												1				1		
78.0											2	1	4	1	1	9		
77.0											1	2	4	3	1	11		
76.0																		
76.0										2	4	13	15	4	1	39		
74.0								2	2	6	12	38	22	3	2	87		
74.0								3	10	29	68	56	31	2		199		
73.0																		
72.0							1	10	37	92	158	58	13	2	1	372		
71.0							1	31	102	214	144	47	4	1		544		
71.0								79	216	278	146	28	1	1		773		
70.0						2	5	19	237	371	208	41	9			937		
69.0						1	12	58	360	350	131	23	2			1043		
68.0				3	5	34	135	360	350	131	23	2						
68.0				2	10	72	241	377	212	45	10	1				970		
67.0				7	33	109	285	231	74	11	1					751		
66.0																		
66.0		1		9	43	158	158	93	10	4						476		
65.0				13	37	85	70	19	7							235		
64.0				1	6	36	50	18	7	1						135		
63.0																		
63.0		1	4	13	20	16	2	2								58		
62.0																		
61.0		1	7	9	9	4	2									32		
61.0																		
60.0			2	5	2											9		
60.0	1															1		
59.0																		
TOTAL	1	5	22	77	198	545	990	1451	1391	1020	609	256	94	17	6	6882		

1966 ARMY MEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

CROTCH HEIGHT 33.05 1.84 0.819 = (0.579)*STATURE(IN)+(-6.73) 1.06

STATURE 68.71 2.60 0.819 = (1.158)*CROTCH HEIGHT(IN)+(30.44) 1.49

TABLE 24

A BIVARIATE FREQUENCY TABLE FOR
CROTCH HEIGHT AND STATURE
1977 ARMY WOMEN

CROTCH HEIGHT(IN)																
24.0	25.0	26.0	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	TOTAL		
73.0											1			1		
72.0										2	2	2		6		
71.0										5	3		1	11		
70.0									2	9	5	1		27		
69.0								3	9	24	9	5		50		
68.0							3	9	36	10	1			90		
67.0						1	9	33	33	4				116		
66.0						5	29	44	33					193		
65.0					6	32	81	57	17					191		
64.0				2	16	65	74	28	5		1			194		
63.0			1	3	43	86	45	14	2					189		
62.0			1	13	68	73	32	2						122		
61.0			4	25	49	38	6							80		
60.0			8	36	29	7								35		
59.0		1	8	21	5									18		
58.0		2	10	3	2	1								7		
57.0		4	2	1										1		
56.0																
TOTAL	1	7	34	104	218	308	279	190	128	39	18	3	1	1330		

STATURE(IN)

1977 ARMY WOMEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

CROTCH HEIGHT 30.07 1.72 0.861 $= (0.579) * \text{STATURE(IN)} + (-7.08)$ 0.88

STATURE 64.15 2.57 0.861 $= (1.282) * \text{CROTCH HEIGHT(IN)} + (25.61)$ 1.30

TABLE 25

A BIVARIATE FREQUENCY TABLE FOR
CROTCH HEIGHT AND UPPER THIGH CIRC
1966 ARMY MEN

	25.0	26.0	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	TOTAL
31.0										1							1
30.0										1		1	1				4
29.0				1	1		1	1		1	2		1	2			10
28.0					1		2	2	4	5	5	3	3	1			26
27.0							7	13	26	17	10	14	3	4	1		100
26.0				1	2	4	17	29	55	37	38	24	16	4			233
25.0	1			1	10	11	40	76	109	101	74	41	24	7	1		495
24.0																	
23.0			1	3	10	34	73	115	178	161	122	80	22	15		2	816
22.0			2	4	10	46	99	185	301	245	192	101	55	16	5	1	1262
21.0				8	18	32	104	222	280	284	219	130	58	16	6	1	1378
20.0				3	8	24	93	194	261	290	202	113	45	18	2	1	1254
19.0				2	7	24	73	109	159	166	102	72	22	9	2	1	748
18.0			1		9	10	29	35	61	61	43	27	5	2			283
17.0						4	6	7	10	19	9	3	1				59
16.0							1	2	7	2							12
15.0												1					1
TOTAL	1	5	22	77	198	545	990	1451	1391	1020	609	256	94	17	6		6682

UPPER THIGH CIRC(IN)

CROTCH HEIGHT(IN)

1966 ARMY MEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
CROTCH HEIGHT	33.05	1.84	0.013	$= (0.012) * \text{UPPER THIGH CIRC(IN)} + (32.79)$	1.84
UPPER THIGH CIRC	21.82	1.89	0.013	$= (0.013) * \text{CROTCH HEIGHT(IN)} + (21.39)$	1.89

TABLE 26

A BIVARIATE FREQUENCY TABLE FOR
CROTCH HEIGHT AND UPPER THIGH CIRC
1977 ARMY WOMEN

	CROTCH HEIGHT(IN)																TOTAL
	24.0	25.0	26.0	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	
29.0						1		1	1	1							4
28.0							2	2	2	4							10
27.0						3	5	9	5	3		1					26
26.0																	
25.0					2	9	5	10	9	9	4			1			49
24.0			1	4	4	20	27	28	26	18	5	2	1				136
23.0			1	5	18	38	51	68	37	26	7	5	1				253
22.0		1	3	6	24	53	92	57	35	29	7	5	1				313
21.0			1	4	22	37	69	46	37	23	11	3					253
20.0				5	17	32	29	38	28	9	3	2					163
19.0			1	8	15	14	22	14	8	4	2						86
18.0				2	1	10	5	5	2	2							27
17.0					1	3	1	2									7
16.0								1									1
TOTAL	1	7	34	104	218	308	279	190	128	39	18	3	1				1330

1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
CROTCH HEIGHT	30.07	1.72	0.184	$= (0.177) * \text{UPPER THIGH CIRC}(\text{IN}) + (26.10)$	1.69
UPPER THIGH CIRC	22.40	1.79	0.184	$= (0.191) * \text{CROTCH HEIGHT}(\text{IN}) + (16.66)$	1.76

TABLE 27

A BIVARIATE FREQUENCY TABLE FOR
FOOT BREADTH AND FOOT CIRC
1966 ARMY MEN

		FOOT BREADTH(IN)											TOTAL
		3.00	3.25	3.50	3.75	4.00	4.25	4.50	4.75	5.00	5.25	5.50	
12.50	FOOT CIRC(IN)									1			1
12.25													
12.00													
11.75								5					5
11.50							1	5	2				8
11.25						1	13	23	2				39
11.00						3	32	46	8				89
10.75					1	17	108	71	7				204
10.50					10	137	290	83	2				522
10.25					22	307	361	40	1				731
10.00					109	681	374	26					1190
9.75				2	300	668	175	6					1149
9.50		1	6	421	497	68	6						999
9.25			22	469	258	50	6						806
9.00		2	48	272	98	24	2						447
8.75		2	44	120	50	9							225
8.50		2	31	71	65	8							177
8.25			16	20	12								48
8.00		1	7	16									24
7.75		1	4	12									17
7.50				1									1
7.25				1									1
TOTAL		9	182	1843	2793	1513	319	22	1				6882

1966 ARMY MEN
FOOT BREADTH
FOOT CIRC

MEAN 3.87
ST DEV 0.22
R 0.710
REGRESSION EQUATIONS
 $\text{FOOT CIRC} = (0.262) \times \text{FOOT BREADTH} + (1.29)$
 $\text{FOOT BREADTH} = (1.924) \times \text{FOOT CIRC} + (2.40)$

STD ERROR
0.15
0.41

TABLE 28

A BIVARIATE FREQUENCY TABLE FOR
FOOT BREADTH AND FOOT CIRC
1977 ARMY WOMEN

	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50	TOTAL
10.75							1		1
10.50							4	1	5
10.25						7	6		13
10.00				13	11	3			27
9.75				38	32				70
9.50									201
9.25			1	9	156	34	1		213
9.00				52	151	10			283
8.75			4	143	132	4			273
8.50			24	196	53				166
8.25			44	105	7				65
8.00		4	42	18	1				22
7.75		6	13	3					1
7.50			1						
TOTAL	10	129	528	551	98	15	1		1330

FOOT CIRC(IN)

1977 ARMY WOMEN
FOOT BREADTH
FOOT CIRC

MEAN 3.49
8.90

ST DEV 0.20
0.45

R 0.847
0.847

REGRESSION EQUATIONS
= (0.382)*FOOT CIRC(IN)+(0.09)
= (1.880)*FOOT BREADTH(IN)+(2.34)

STD ERROR
0.11
0.24

TABLE 29

A BIVARIATE FREQUENCY TABLE FOR
FOOT BREADTH AND HEEL BREADTH
1966 ARMY MEN

	FOOT BREADTH(IN)												
	3.00	3.25	3.50	3.75	4.00	4.25	4.50	4.75	5.00	TOTAL			
HEEL BREADTH(IN)	3.60					1	2						3
	3.50					1	1						2
	3.40			1	1	5	8	1					16
	3.30				4	16	9	1					29
	3.20				2	28	54	27	4	1			116
	3.10				2	6	55	92	36	5			198
	3.00				2	60	249	264	66	2			643
	2.90				4	97	292	227	56	3			679
	2.80				9	323	719	386	63	4			1504
	2.70				1	27	339	594	251	27	1		1240
	2.60				3	57	593	170	18	1			1406
	2.50				2	50	353	214	41	5			665
	2.40				2	14	67	34	4				121
	2.30				16	27	9						53
	2.20				1	1	3	1					6
	2.10						2						2
	2.00												
TOTAL	9	162	1843	2793	1513	319	22	1					6682

1966 ARMY MEN
FOOT BREADTH
HEEL BREADTH

MEAN 3.87
ST DEV 0.22
R 0.499
REGRESSION EQUATIONS
HEEL BREADTH(IN) = (0.582) * FOOT BREADTH(IN) + (2.30)
FOOT BREADTH(IN) = (0.429) * HEEL BREADTH(IN) + (1.04)

STD ERROR
0.19
0.16

TABLE 30
A BIVARIATE FREQUENCY TABLE FOR
FOOT BREADTH AND HEEL BREADTH
1977 ARMY WOMEN

HEEL BREADTH (IN)	FOOT BREADTH (IN)										TOTAL
	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50	4.75	5.00	
3.00						1	2				3
2.90			1	3	4	3	1	1			13
2.80				2	25	11	6				44
2.70				15	38	13	3				67
2.60			9	40	108	32	1				190
2.50			16	142	173	24	2				357
2.40	1	28	134	114	11						288
2.30		49	137	70	2						258
2.20	5	16	37	17	1						76
2.10	2	10	16	4							32
2.00		2									2
1.90											
TOTAL	10	129	526	551	98	15	1				1330

1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
FOOT BREADTH	3.49	0.20	0.503	$= (0.630) * \text{HEEL BREADTH (IN)} + (1.98)$	0.18
HEEL BREADTH	2.40	0.16	0.503	$= (0.402) * \text{FOOT BREADTH (IN)} + (0.99)$	0.14

TABLE 31
A BIVARIATE FREQUENCY TABLE FOR
FOOT LENGTH AND FOOT BREADTH
1966 ARMY MEN

		FOOT LENGTH(IN)																				
		8.25	8.50	8.75	9.00	9.25	9.50	9.75	10.00	10.25	10.50	10.75	11.00	11.25	11.50	11.75	12.00	12.25	12.50	12.75	TOTAL	
FOOT BREADTH(IN)	6.00															1					1	
	4.75										1	3	1	6	2	1	4	2	2		22	
	4.50									8	29	44	54	67	62	18	21	10	3	1	319	
	4.25								2													
	4.00						4	3	41	101	182	373	295	247	172	57	22	15	1		1513	
	3.75							64	148	432	604	679	436	227	127	41	9	3			2793	
	3.50			1	10	55	160	281	424	395	322	123	47	18	6	1					1843	
	3.25	1	1		9	17	30	28	42	26	18	7	3								182	
	3.00					1	4		2	2											9	
	TOTAL	1	1	1	21	103	257	502	1007	1239	1439	915	597	381	124	57	30	6	1			6682

1966 ARMY MEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
FOOT LENGTH	10.54	0.51	0.541	$= (1.286) * \text{FOOT BREADTH}(\text{IN}) + (5.56)$	0.43
FOOT BREADTH	3.87	0.22	0.541	$= (0.227) * \text{FOOT LENGTH}(\text{IN}) + (1.48)$	0.18

TABLE 32

A BIVARIATE FREQUENCY TABLE FOR
FOOT LENGTH AND FOOT BREADTH
1977 ARMY WOMEN

		FOOT LENGTH(IN)																			
		8.00	8.25	8.50	8.75	9.00	9.25	9.50	9.75	10.00	10.25	10.50	10.75	11.00	11.25	11.50	11.75	TOTAL			
FOOT BREADTH(IN)	4.50									1								1			
	4.25					1				3		3	3	2				15			
	4.00					4	10	8	19	28	15	10	2	2			1	98			
	3.75		1							83	43	15	8	1				551			
	3.50			7	17	46	114	110	107	61	39	7	3					626			
	3.25	1	5	22	42	101	134	111	61	39	7	3						129			
	3.00		3	12	32	31	33	11	5	1	1							10			
	2.75		2	2	4		2														
TOTAL		1	11	43	95	183	293	240	193	155	69	31	12	3		1		1330			

1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
FOOT LENGTH	9.57	0.49	0.531	$= (1.290)*\text{FOOT BREADTH(IN)} + (5.07)$	0.42
FOOT BREADTH	3.49	0.20	0.531	$= (0.219)*\text{FOOT LENGTH(IN)} + (1.39)$	0.17

TABLE 33

A BIVARIATE FREQUENCY TABLE FOR
FOOT LENGTH AND FOOT CIRC
1966 ARMY MEN

		FOOT LENGTH(IN)																				
		8.25	8.50	8.75	9.00	9.25	9.50	9.75	10.00	10.25	10.50	10.75	11.00	11.25	11.50	11.75	12.00	12.25	12.50	12.75	TOTAL	
12.50	FOOT CIRC(IN)															1					1	
12.25																						
12.00																						
11.75																						
11.50														1	2			1				
11.25																						
11.00														13	4			3				
10.75														9	14			2				
10.50														48	37			4				
10.25														96	70			6		1		
10.00														158	69			9				
9.75														112	22			22				
9.50														118	84			24				
9.25														86	50			2				
9.00														55	24			3				
8.75														26	11			5				
8.50														17	6			4				
8.25														3	1			3				
8.00														2				2				
7.75													2									
7.50																						
7.25																						
TOTAL		1	1	1	21	103	257	502	1007	1239	1439	915	597	381	124	57	30	6	1		6692	

1966 ARMY MEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

FOOT LENGTH 10.54 0.51 0.493 = (0.433)*FOOT CIRC(IN)+(6.28) 0.45

FOOT CIRC 9.85 0.58 0.493 = (0.562)*FOOT LENGTH(IN)+(3.93) 0.51

TABLE 34

A BIVARIATE FREQUENCY TABLE FOR
FOOT LENGTH AND FOOT CIRC
1977 ARMY WOMEN

		FOOT LENGTH(IN)																	
		8.00	8.25	8.50	8.75	9.00	9.25	9.50	9.75	10.00	10.25	10.50	10.75	11.00	11.25	11.50	11.75	TOTAL	
FOOT CIRC(IN)	10.75													1				1	
	10.50										3			1				5	
	10.25								1	4	4	3		1				13	
	10.00							2	2	7	5	1	1					27	
	9.75							5	12	14	19	9	6	5				70	
	9.50					1	9	30	35	42	40	27	12	3	1		1	201	
	9.25			1	2	3	18	44	55	47	30	9	3	1				213	
	9.00			5	6	14	41	73	63	44	30	11	2					283	
	8.75			6	10	30	56	84	40	24	17	3	4					273	
	8.50	1	1	11	23	43	34	26	14	3								156	
	8.25		1	8	20	12	17	6				1						65	
TOTAL	8.00		3	7	3	4	4	1										22	
	7.75																	1	
	7.50																		
TOTAL		1	11	43	95	183	293	240	193	155	69	31	12	3			1	1330	

1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
FOOT LENGTH	9.57	0.49	0.592	= (0.648)*FOOT CIRC(IN)+(3.81)	0.40
FOOT CIRC	8.90	0.45	0.592	= (0.540)*FOOT LENGTH(IN)+(3.73)	0.36

TABLE 35

INSTEP LENGTH (IN)

	MEAN	ST DEV	R	REGRESSION EQUATIONS
1966 ARMY MEN				
FOOT LENGTH	10.54	0.51	0.898	$= (1.118) * \text{INSTP LENGTH}(\text{IN}) + (1.90)$
INSTP LENGTH	7.73	0.41	0.898	$= (0.722) * \text{FOOT LENGTH}(\text{IN}) + (0.12)$

TABLE 36

A BIVARIATE FREQUENCY TABLE FOR
FOOT LENGTH AND INSTEP LENGTH
1977 ARMY WOMEN

		FOOT LENGTH(IN)																		TOTAL	
		8.00	8.25	8.50	8.75	9.00	9.25	9.50	9.75	10.00	10.25	10.50	10.75	11.00	11.25	11.50	11.75				
INSTEP LENGTH(IN)	8.50														1		1		2		
	8.25													3	6	1			10		
	8.00										7	10	18	6	1				42		
	7.75											45	9						112		
	7.50								1	14	43	83	11	1					180		
	7.25						4	21		60	83	11		1					351		
	7.00						9	70	141	105	22	3							300		
	6.75						1	53	73	14									218		
	6.50						3	103	61	4									97		
	6.25						4	18	2										17		
	6.00						6	10	1										1		
	5.75	1																			
TOTAL	1	11	43	95	183	293	240		193	155	69	31	12	3		1		1330			

1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
FOOT LENGTH	9.57	0.49	0.926	$= (1.176) * \text{INSTEP LENGTH (IN)} + (1.31)$	0.19
INSTEP LENGTH	7.03	0.39	0.926	$= (0.729) * \text{FOOT LENGTH (IN)} + (0.05)$	0.15

TABLE 37

A BIVARIATE FREQUENCY TABLE FOR
HAND BREADTH AND HAND LENGTH
1966 ARMY MEN

HAND BREADTH(IN)											
	2.75	3.00	3.25	3.50	3.75	4.00	4.25	TOTAL			
9.50						1				1	
9.25					1	5					6
9.00					4	3	1				8
8.75											
				1	14	18	8				41
8.50				5	68	37	10				121
8.25											
			2	57	249	94	13				415
8.00											
		1	16	245	644	165	21				1092
7.75											
		1	60	534	779	126	9				1509
7.50											
		2	93	725	689	86	1				1595
7.25											
		7	184	763	357	30	2				1343
7.00											
		8	125	225	69	3					430
6.75											
		1	41	44	5						91
6.50											
		5	17	6							28
6.25											
		1									1
6.00											
TOTAL	26	539	2605	2879	567	65					6601

1966 ARMY MEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
HAND BREADTH	3.50	0.19	0.522	$= (0.266) \times \text{HAND LENGTH(IN)} + (1.51)$	0.16
HAND LENGTH	7.49	0.38	0.522	$= (1.024) \times \text{HAND BREADTH(IN)} + (3.90)$	0.32

TABLE 38

A BIVARIATE FREQUENCY TABLE FOR
HAND BREADTH AND HAND LENGTH
1977 ARMY WOMEN

HAND BREADTH (IN)							
	2.50	2.75	3.00	3.25	3.50	3.75	TOTAL
8.25					1		1
8.00				2	7	1	10
7.75						1	56
7.50			1	25	29		116
7.25			7	63	44	2	281
7.00			32	192	65	2	339
6.75			110	196	33		315
6.50		5	136	160	14		176
6.25		4	119	63			31
6.00		3	23	5			6
5.75		1	4				
TOTAL	13	432	896	193		6	1330

STD ERROR
0.12
0.28

1977 ARMY WOMEN
HAND BREADTH
HAND LENGTH

REGRESSION EQUATIONS

R

ST DEV

MEAN

1977 ARMY WOMEN

STD ERROR

HAND BREADTH

STD ERROR

HAND LENGTH

R

ST DEV

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1977 ARMY WOMEN

STD ERROR

TABLE 39

A BIVARIATE FREQUENCY TABLE FOR
HAND BREADTH AND PALM LENGTH
1966 ARMY MEN

PALM LENGTH(IN)	HAND BREADTH(IN)										TOTAL
	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50	4.75	5.00	
5.25					5	6	1				12
5.00				8	39	28	6				82
4.75			1	79	293	95	16				487
4.50			4	593	1112	206	22				1995
4.25		1	61	1199	996	179	17				2588
4.00		5	192	595	366	45	3				1228
3.75		12	207	120	68	8					273
3.50		6	71	10							15
3.25		2	3								1
3.00				1							
TOTAL	26	539	2605	2879	567	65					6681

1966 ARMY MEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
HAND BREADTH	3.50	0.19	0.398	$= (0.311) * \text{PALM LENGTH(IN)} + (2.21)$	0.18
PALM LENGTH	4.17	0.25	0.398	$= (0.510) * \text{HAND BREADTH(IN)} + (2.38)$	0.23

TABLE 40

A BIVARIATE FREQUENCY TABLE FOR
HAND BREADTH AND PALM LENGTH
1977 ARMY WOMEN

PALM LENGTH (IN)	HAND BREADTH (IN)									
	2.50	2.75	3.00	3.25	3.50	3.75	3.50	3.75	3.50	TOTAL
4.75				1	2					3
4.50			4	34	30	2				70
4.25			38	186	78	2				304
4.00		5	202	322	62	2				593
3.75		8	169	147	11					335
3.50			18	6						24
3.25			1							1
3.00										
TOTAL	13	432	696	183	6					1330

1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
HAND BREADTH	3.08	0.15	0.483	$= (0.359) * \text{PALM LENGTH (IN)} + (1.68)$	0.13
PALM LENGTH	3.89	0.21	0.483	$= (0.650) * \text{HAND BREADTH (IN)} + (1.89)$	0.18

TABLE 41
A BIVARIATE FREQUENCY TABLE FOR
HAND CIRC AND HAND BREADTH
1966 ARMY MEN

		HAND CIRC(IN)																			
		7.00	7.25	7.50	7.75	8.00	8.25	8.50	8.75	9.00	9.25	9.50	9.75	10.00	10.25	10.50	TOTAL				
HAND BREADTH(IN)	4.25								4	8	17	15	13	4	3	1		65			
	4.00						4	35	75	131	126	143	30	17	6			567			
	3.75																				
	3.50				5	43	157	516	1011	676	308	127	25	6	5			2879			
	3.25	1	6	44	400	762	816	438	91	33	13	1						2605			
	3.00	2	35	115	223	105	41	14	4									539			
	2.75	7	8	5	1	2	3											26			
	TOTAL	10	49	169	667	1030	1411	1542	910	484	298	69	27	14	1			6681			

1966 ARMY MEN	MEAN	8.51	ST DEV	0.45	R	0.753	REGRESSION EQUATIONS	STD ERROR
HAND CIRC							$= (1.744) * \text{HAND BREADTH(IN)} + (2.40)$	0.29
HAND BREADTH							$= (0.325) * \text{HAND CIRC(IN)} + (0.74)$	0.13

TABLE 42

A BIVARIATE FREQUENCY TABLE FOR
HAND CIRC AND HAND BREADTH
1977 ARMY WOMEN

HAND BREADTH (IN)	HAND CIRC (IN)												TOTAL
	6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50	TOTAL	
3.75										2	4		6
3.50							8	81	96	7	1		183
3.25					17	203	343	120	13				696
3.00			5	67	180	173	7						432
2.75			6	8									13
2.50	1												
TOTAL	1	11	73	197	376	358	201	99	9	5			1330

STD ERROR
0.12
0.06

1977 ARMY WOMEN MEAN ST DEV R REGRESSION EQUATIONS
HAND CIRC 7.26 0.34 0.933 = (2.058)*HAND BREADTH(IN)+(0.93)
HAND BREADTH 3.08 0.15 0.933 = (0.423)*HAND CIRC(IN)+(0.01)

TABLE 43

A BIVARIATE FREQUENCY TABLE FOR
HAND CIRC AND HAND LENGTH
1966 ARMY MEN

HAND CIRC(IN)																	
7.00	7.25	7.50	7.75	8.00	8.25	8.50	8.75	9.00	9.25	9.50	9.75	10.00	10.25	10.50	TOTAL		
9.50									1						1		
9.25							1		3	2					6		
9.00								1	4						8		
8.75						2	4	4	10	6	2	1	1		41		
8.50				2	1	13	18	29	17	7	6	2			121		
8.25				5	21	42	103	104	61	10	5	3			415		
8.00				34	86	166	304	240	131	97	7	4			1092		
7.75		1	5	94	196	343	419	238	127	17	2	3			1509		
7.50		2	20	94	198	343	411	193	82	9	4				1596		
7.25	1	6	33	171	262	394	411	82	30	2	1	1			1343		
7.00	4	16	53	228	312	356	225	63	15	1					430		
6.75	1	17	43	89	122	82	56	15	4						91		
6.50	1	3	11	37	22	12	1	3	1						28		
6.25	2	5	4	7	6	2									1		
6.00	1																
TOTAL	10	48	169	667	1030	1412	1542	910	484	298	69	27	14	1	6882		

HAND LENGTH(IN)

1966 ARMY MEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
HAND CIRC	8.51	0.45	0.496	$= (0.586) \times \text{HAND LENGTH(IN)} + (4.12)$	0.39
HAND LENGTH	7.49	0.38	0.496	$= (0.420) \times \text{HAND CIRC(IN)} + (3.92)$	0.33

TABLE 44
A BIVARIATE FREQUENCY TABLE FOR
HAND CIRC AND HAND LENGTH
1977 ARMY WOMEN

HAND CIRC(IN)													
6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50	TOTAL		
6.25								1			1		
8.00					2		2	3	2	1		1	10
7.75				1	5	7	17	22	3	1		1	56
7.50				6	14	34	37	24	1	1		1	116
7.25							69	26	2	2		2	291
7.00							103	16					339
							101	8					315
6.75							87	19	1				176
							25	3					31
6.50	1	3	15	67	114	110	56						5
		6	34	52	8	1							
6.25		1	8	11	9								
6.00		1	2										
				2									
5.75													
TOTAL	1	11	73	197	376	358	201	99	9	5			1330

1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
HAND CIRC	7.26	0.34	0.592	$= (0.563) \times \text{HAND LENGTH(IN)} + (3.40)$	0.27
HAND LENGTH	6.87	0.36	0.592	$= (0.623) \times \text{HAND CIRC(IN)} + (2.34)$	0.29

TABLE 45

A BIVARIATE FREQUENCY TABLE FOR
HAND CIRC AND PALM LENGTH
1966 ARMY MEN

HAND CIRC(IN)																
7.00	7.25	7.50	7.75	8.00	8.25	8.50	8.75	9.00	9.25	9.50	9.75	10.00	10.25	10.50	TOTAL	
6.25						1	2		2	5	2				12	
6.00				2	3	3	16	19	14	15	4	4	2		82	
4.75							105	112	67	78	16	8	3	1	487	
4.50				11	27	59	543	389	197	127	27	8	7		1995	
4.25		4	22	103	213	375	624	607	308	166	63	18	1		2589	
4.00		2	17	58	282	436	294	235	91	32	10	2			1228	
3.75		4	19	59	205	276	54	34	11	6					273	
3.50		2	8	29	58	71									16	
3.25		1	1	1	6	4									1	
3.00		1														
TOTAL	10	49	169	667	1030	1412	1542	910	484	298	69	27	14	1	6692	

1966 ARMY MEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
HAND CIRC	8.51	0.45	0.419	= (0.758)*PALM LENGTH(IN)+(5.34)	0.41
PALM LENGTH	4.17	0.25	0.419	= (0.232)*HAND CIRC(IN)+(2.20)	0.22

TABLE 46

A BIVARIATE FREQUENCY TABLE FOR
HAND CIRC AND PALM LENGTH
1977 ARMY WOMEN

		HAND CIRC(IN)												TOTAL
		6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50	8.75	
PALM LENGTH(IN)	4.75						1		1	1				3
	4.50				1	3	8	16	19	18	4	1		70
	4.25				4	16	56	97	78	48	2	3		304
	4.00	1	3	29	83	193	170	82	28	3	1			593
	3.75		7	34	86	113	72	20	4					335
	3.50		1	4	10	5	3	1						24
	3.25				1									1
	3.00													
TOTAL		1	11	73	197	376	368	201	99	9	5			1330

1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
HAND CIRC	7.26	0.34	0.473	$= (0.775) \times \text{PALM LENGTH(IN)} + (4.25)$	0.30
PALM LENGTH	3.89	0.21	0.473	$= (0.288) \times \text{HAND CIRC(IN)} + (1.80)$	0.18

TABLE 47

A BIVARIATE FREQUENCY TABLE FOR
HEAD BREADTH AND HEAD CIRC
1966 ARMY MEN

	5.00	5.25	5.50	5.75	6.00	6.25	6.50	6.75	7.00	TOTAL
HEAD CIRC(IN)	HEAD BREADTH(IN)									
26.25									1	1
26.00										
24.75										
24.50								1		1
24.25							3	2		5
24.00					1	4	2	1		8
23.75					2	4	13	2	1	22
23.50				1	4	28	28	7	1	69
23.25					11	54	61	11	2	139
23.00			1	5	28	129	83	18	2	266
22.75			1	4	101	252	137	28		523
22.50			2	18	181	327	149	24		701
22.25			2	43	262	364	117	7		815
22.00	1	5	105	445	441	142	10			1149
21.75			6	140	412	364	83	3		1008
21.50	1	9	155	365	220	39	3			792
21.25		14	161	274	160	18				627
21.00		10	107	115	53	4	1			290
20.75		8	57	72	22	2				161
20.50		10	34	23	3	1				71
20.25	1	4	12	7	1					25
20.00		1	8							9
TOTAL	3	73	850	2303	2446	882	118	7		6682

1966 ARMY MEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
HEAD BREADTH	6.01	0.23	0.525	$= (0.191) \text{ HEAD CIRC(IN)} + (1.79)$	0.20
HEAD CIRC	22.09	0.63	0.525	$= (1.442) \text{ HEAD BREADTH(IN)} + (13.43)$	0.54

TABLE 46

A BIVARIATE FREQUENCY TABLE FOR
HEAD BREADTH AND HEAD CIRC
1977 ARMY WOMEN

HEAD BREADTH (IN)										
	5.00	5.25	5.50	5.75	6.00	6.25	6.50			TOTAL
24.25						1				1
24.00							1			1
23.75								1		4
23.50				1	2					13
23.25				1	5	5	2			10
23.00				1	2	4	3			36
22.75				6	12	11	7			52
22.50				9	30	11	2			91
22.25			1	27	43	16	4			147
22.00			6	46	66	24	5			174
21.75			3	77	71	19	4			205
21.50			10	112	74	9				229
21.25		1	16	126	73	13				148
21.00		1	17	94	91	4	1			106
20.75			22	69	13	2				71
20.50		2	25	38	6					26
20.25		1	9	15	1					14
20.00		2	6	5	1					1
19.75				1						1
19.50					1					
TOTAL	7	115	628	431	119	30				1330

HEAD CIRC(IN)

1977 ARMY WOMEN
HEAD BREADTH
HEAD CIRC

MEAN
5.75
21.62

ST DEV

0.21
0.64

R

0.548
0.548

REGRESSION EQUATIONS

$= (0.180) * \text{HEAD CIRC}(\text{IN}) + (1.86)$
 $= (1.667) * \text{HEAD BREADTH}(\text{IN}) + (12.03)$

STD ERROR

0.18
0.54

TABLE 49

A BIVARIATE FREQUENCY TABLE FOR
HEAD LENGTH AND HEAD BREADTH
1966 ARMY MEN

HEAD LENGTH(IN)													
	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50	8.75	9.00	TOTAL	
HEAD BREADTH(IN)	7.00					2	4			1		7	
	6.75					35	34	15	4	1		118	
	6.50		1	7	21	167	261	107	23	6		882	
	6.25		6	60	167	261	724	285	53	8		2446	
	6.00		24	173	445	734	724	165	27	2	1	2303	
	5.75	1	24	161	442	762	718	35	5			850	
	5.50	1	7	83	182	303	234	4	2			73	
	5.25		1	8	16	28	14	1				3	
5.00				1									
TOTAL	2	63	492	1274	2116	1990	612	112	20	1		6682	

1966 ARMY MEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
HEAD LENGTH	7.66	0.29	0.109	$= (0.137) \times \text{HEAD BREADTH(IN)} + (6.84)$	0.29
HEAD BREADTH	6.01	0.23	0.109	$= (0.087) \times \text{HEAD LENGTH(IN)} + (5.34)$	0.23

TABLE 50

A BIVARIATE FREQUENCY TABLE FOR
HEAD LENGTH AND HEAD BREADTH
1977 ARMY WOMEN

		HEAD LENGTH(IN)												TOTAL
HEAD BREADTH(IN)		6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	TOTAL			
		6.50	6.25	6.00	6.75	6.50	6.25	6.00	5.75	5.50	5.25	5.00		
6.50					1	5	13	5	6			30		
6.25					9	27	38	26	16	2		119		
6.00			2		25	99	141	121	39	2		431		
6.75			4		42	169	240	133	30	5		628		
6.50	2		7		12	43	45	15				115		
6.25					1	3	2		1			7		
6.00														
TOTAL	2	13	90	346	479	300	91	9				1330		

STD ERROR
0.26
0.21

1977 ARMY WOMEN
HEAD LENGTH
HEAD BREADTH

MEAN
7.37
5.75

ST DEV
0.26
0.21

R
0.161
0.161

REGRESSION EQUATIONS
= (0.201)*HEAD BREADTH(IN)+(6.21)
= (0.129)*HEAD LENGTH(IN)+(4.80)

TABLE 51

A BIVARIATE FREQUENCY TABLE FOR
HEAD LENGTH AND HEAD CIRC
1966 ARMY MEN

HEAD LENGTH(IN)														
6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50	8.75	9.00	TOTAL			
25.25									1		1			
25.00														
24.75									1		1			
24.50									1		5			
24.25							1	3	1		8			
24.00							2	2	3	1	22			
23.75						1	7	9	5		69			
23.50						7	34	24	4		139			
23.25					2	38	67	32			268			
23.00					12	109	124	19	2		523			
22.75					53	271	173	14	3		701			
22.50					160	412	106	7			815			
22.25					44	268	445	57			1149			
22.00					159	529	422	28			1008			
21.75					38	271	495	190	12	2	792			
21.50					71	291	352	75	1		627			
21.25					135	284	187	15			290			
21.00					95	134	41	3			161			
20.75					17	86	44	13	1		71			
20.50					11	36	19	4	1		25			
20.25					7	14	3				9			
20.00					1	2	3	3			6682			
TOTAL	2	63	492	1274	2116	1990	612	112	20	1				

1966 ARMY MEN MEAN 7.66 ST DEV 0.29 R 0.788 REGRESSION EQUATIONS
 HEAD LENGTH 22.09 0.63 0.788 = (0.360)*HEAD CIRC(IN)+(-0.29)
 HEAD CIRC STD ERROR 0.18
 0.39

TABLE 52

A BIVARIATE FREQUENCY TABLE FOR
HEAD LENGTH AND HEAD CIRC
1977 ARMY WOMEN

HEAD LENGTH(IN)													TOTAL
6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25					
24.25								1				1	
24.00								1				1	
23.75								2	1			4	
23.50					1			5	5	3		13	
23.25								3	6	1		10	
23.00									16	3		36	
22.75					1	7	9	23				52	
22.50					3	17	54	17				91	
22.25					11	48	76	12				147	
22.00					18	77	71	8				174	
21.75					44	118	42					205	
21.50				1	12	75	15	1				229	
21.25				14	72	59	3					148	
21.00			3	18	72	13						108	
20.75			2	22	41	6						71	
20.50			3	15	8							26	
20.25	1	4	8	1								14	
20.00	1											1	
19.75		1										1	
19.50													
TOTAL	2	13	90	348	479	300	91	9				1330	

1977 ARMY WOMEN
HEAD LENGTH
HEAD CIRC

MEAN 7.37
21.62

ST DEV 0.26
0.64

R 0.796
0.796

REGRESSION EQUATIONS
= (0.326)*HEAD CIRC(IN)+(0.32)
= (1.943)*HEAD LENGTH(IN)+(7.31)

STD ERROR
0.16
0.39

TABLE 53

A BIVARIATE FREQUENCY TABLE FOR
HIP BREADTH AND HIP CIRC
1966 ARMY MEN

	10.5	11.0	11.5	12.0	12.5	13.0	13.5	14.0	14.5	15.0	15.5	16.0	16.5	17.0	17.5	18.0	TOTAL
63.0															1		1
62.0																	
61.0																	
60.0												1			1		2
59.0														1			1
58.0												1					5
57.0										2		2		1			7
56.0										6		1					14
55.0										11		16					40
54.0								3	14	28		22		3			70
53.0								3	17	40		48		5			122
52.0								7	40	90		46		6			189
51.0										37		6					339
50.0										16		2					571
49.0										7		1					785
48.0										2							1036
47.0																	1113
46.0																	1113
45.0																	720
44.0																	380
43.0																	137
42.0																	34
41.0																	4
40.0																	
39.0																	
38.0																	
37.0																	
36.0																	
35.0																	
34.0																	
33.0																	
32.0																	
31.0																	
30.0																	
TOTAL	10	74	389	1104	1784	1491	1018	506	203	64	25	10	1	2	1		6682

HIP CIRC(IN)

HIP BREADTH(IN)

1966 ARMY MEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
HIP BREADTH	13.07	0.79	0.859	$= (0.276) * \text{HIP CIRC(IN)} + (2.83)$	0.40
HIP CIRC	37.09	2.46	0.859	$= (2.673) * \text{HIP BREADTH(IN)} + (2.15)$	1.26

TABLE 54

A BIVARIATE FREQUENCY TABLE FOR
HIP BREADTH AND HIP CIRC
1977 ARMY WOMEN

HIP BREADTH(IN)																			
11.0	11.5	12.0	12.5	13.0	13.5	14.0	14.5	15.0	15.5	16.0	16.5	17.0	17.5	18.0	18.5	19.0	19.5	TOTAL	
53.0																	1	1	
52.0																			
51.0																			
50.0																			
49.0													1						
48.0											1								
47.0												1		1					
46.0												1	2						
45.0											4	1							
44.0											2	3	6						
43.0										1	13	11	2	1					
42.0										8	18	16	4						
41.0										38	34	11	2						
40.0	1					1	14			63	26	3							
39.0	1					10	58	79		40	6								
38.0						32	113	75		13	3								
37.0					5	11	72	85		24	2								
36.0			1	11	47	67	27	3											
35.0			6	52	17	3													
34.0		1	11	62	17	3													
33.0	1	3	22	25	4														
32.0	2	6	16	2															
31.0		5	1																
30.0	1	1																	
TOTAL	4	16	58		142	223	286	249	166	102	47	14	10	1	1		1		1330

(IN) CIRC HIP

1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
HIP BREADTH	13.92	0.96	0.906	$= (0.352) * \text{HIP CIRC(IN)} + (0.69)$	0.41
HIP CIRC	37.59	2.48	0.906	$= (2.333) * \text{HIP BREADTH(IN)} + (5.12)$	1.05

A BIVARIATE FREQUENCY TABLE FOR
HIP BREADTH AND WEIGHT
1966 ARMY MEN

WEIGHT(LB)

STD ERROR

TABLE 56

A BIVARIATE FREQUENCY TABLE FOR
HIP BREADTH AND WEIGHT
1977 ARMY WOMEN

WEIGHT(LB)	HIP BREADTH(IN)																			TOTAL
	11.0	11.5	12.0	12.5	13.0	13.5	14.0	14.5	15.0	15.5	16.0	16.5	17.0	17.5	18.0	18.5	19.0	19.5		
220.0																		1	1	
215.0														1					1	
210.0												1							1	
205.0									1										2	
200.0																			1	
195.0										1									5	
190.0										2									3	
185.0									2	2	2	3			1				8	
180.0								1	1	1	4	1	2						10	
175.0									3	1	2	2	1						9	
170.0									4	0	2								16	
165.0							1		3	5	10	7	2						30	
160.0							3		4	7	14	19	11	2	1				68	
155.0							4		4	16	21	10	7	1					62	
150.0							3		30	30	15	4	3						97	
145.0							11		22	38	22	16	3	1					114	
140.0							2		7	46	42	27	11	1					136	
135.0							1		2	21	60	41	22	5					142	
130.0							1		1	11	28	57	26	11	3				138	
125.0							1		1	21	53	54	23	4	1				157	
120.0							1		1	20	33	25	14						94	
115.0							1		4	26	43	15	5	1					96	
110.0							1		17	31	11	1	2						69	
105.0							2		4	11	19	6	2	1					45	
100.0							2		4	13	7	3	1						30	
95.0									3	6	2								11	
90.0									2	1	1								4	
85.0																				
TOTAL	4	16	58	142	223	296	249	166	102	47	14	10	1	1			1		1330	

STD ERROR

0.58

REGRESSION EQUATIONS

R = 0.801 = (0.041)*WEIGHT(LB)+(8.50)

R = 0.801 = (15.591)*HIP BREADTH(IN)+(-84.92)

11.24

1977 ARMY WOMEN

MEAN

ST DEV

R

0.96

0.801

0.801

0.96

13.92

132.11

18.76

15.591

11.24

0.58

A BIVARIATE FREQUENCY TABLE FOR
HIP CIRC AND UPPER THIGH CIRC
1966 ARMY MEN

		HIP CIRC(IN)																									
		30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0	54.0	
31.0																				1						1	
30.0																						1				4	
29.0																								10			
28.0													1				3	2	2					1			
27.0										1	1	2	12	10	23	4	7	5	1	1	1					26	
26.0													55	66	43	24	6	2	1							100	
25.0										2	7	36	55	66	43	24	6	2	1				1			233	
24.0										6	29	63	154	128	64	31	13	5								486	
23.0																										816	
22.0																										1262	
21.0																										1370	
20.0																										1264	
19.0																										748	
18.0																										263	
17.0																										69	
16.0																										12	
15.0																										1	
TOTAL	4	34	137	360	720	1113	1113	1036	785	571	339	199	122	70	40	14	7	6	1	2					1	6492	

	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
1966 ARMY MEN					
HIP CIRC	37.09	2.46	0.852	$= (1.110) * \text{UPPER THIGH CIRC} + (12.87)$	1.29
UPPER THIGH CIRC	21.82	1.89	0.852	$= (0.655) * \text{HIP CIRC} + (-2.47)$	0.99

TABLE 58

A BIVARIATE FREQUENCY TABLE FOR
HIP CIRC AND UPPER THIGH CIRC
1977 ARMY WOMEN

	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0	TOTAL
29.0												1						1						1	4
28.0													2		5	1	1								10
27.0												2	3	11	6	2	2		1						26
26.0													15	6	4	2									49
25.0											1	8	45	20	8										136
24.0											2	16	88	72	34	8									253
23.0											9	42	88	70	27	5									313
22.0											15	68	127	62	19										253
21.0											2	11	59	95	62	19									169
20.0											12	43	79	21	8										86
19.0											10	32	26	16	2										27
18.0											5	11	8	2	1										7
17.0											2	4	1												1
16.0																									
TOTAL	2	6	25	55	84	170	195	241	193	157	101	46	29	14	5	3	2	1	1					1	1330

STD ERROR

1977 ARMY WOMEN MEAN ST DEV R REGRESSION EQUATIONS

1.05

0.76

$$\text{HIP CIRC} = (1.255) * \text{UPPER THIGH CIRC} + (9.48)$$

$$\text{UPPER THIGH CIRC} = (0.655) * \text{HIP CIRC} + (-2.22)$$

TABLE 59

A BIVARIATE FREQUENCY TABLE FOR
HIP CIRC AND WEIGHT
1966 ARMY MEN

	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0	TOTAL
WEIGHT(LB)	HIP CIRC(IN)																								
280.0																								1	1
275.0																									
270.0																									
265.0																									
260.0																									
255.0																									
250.0																									
245.0																									
240.0																									
235.0																									
230.0																									
225.0																									
220.0																									
215.0																									
210.0																									
205.0																									
200.0																									
195.0																									
190.0																									
185.0																									
180.0																									
175.0																									
170.0																									
165.0																									
160.0																									
155.0																									
150.0																									
145.0																									
140.0																									
135.0																									
130.0																									
125.0																									
120.0																									
115.0																									
110.0																									
105.0																									
100.0																									
95.0																									
TOTAL	4	34	137	379	719	1113	1112	1036	785	568	339	189	122	70	40	14	5	7	1	2				1	6877

1966 ARMY MEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR
 HIP CIRC 37.09 2.46 0.919 = $(0.097) \times \text{WEIGHT(LB)} + (21.66)$ 0.97
 WEIGHT 159.10 23.35 0.919 = $(8.722) \times \text{HIP CIRC(IN)} + (-164.41)$ 9.22

TABLE 60

A BIVARIATE FREQUENCY TABLE FOR
HIP CIRC AND WEIGHT
1977 ARMY WOMEN

	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0	TOTAL
WEIGHT(LB)	HIP CIRC(IN)																								
220.0																									1
215.0																				1					1
210.0																				1					1
205.0																									2
200.0															1	1									1
195.0															1		1								5
190.0																									1
185.0																									6
180.0																									8
175.0																									10
170.0																									9
165.0																									16
160.0																									30
155.0																									58
150.0																									62
145.0																									97
140.0																									114
135.0																									136
130.0																									142
125.0																									138
120.0																									167
115.0																									94
110.0																									96
105.0																									63
100.0																									46
95.0																									30
90.0																									11
85.0																									4
TOTAL	2	6	25	55	84	170	195	241	193	157	101	46	28	14	5	3	2	1	1				1		1330

1977 ARMY WOMEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR
 HIP CIRC 37.59 2.48 0.903 = (0.119)*WEIGHT(LB)+(21.87) 1.06
 WEIGHT 132.11 18.76 0.903 = (6.832)*HIP CIRC(IN)+(-124.73) 8.05

TABLE 61

A BIVARIATE FREQUENCY TABLE FOR
INSTEP CIRC AND FOOT CIRC
1966 ARMY MEN

	8.00	8.50	9.00	9.50	10.00	10.50	11.00	11.50	12.00	12.50	13.00	13.50	14.00	14.50	TOTAL
12.50									1						1
12.25															
12.00									1	1	2	1			5
11.75							1	2		2	1				6
11.50							4	13	15	5	2				39
11.25							13	31	26	13	2				89
11.00					1	1	13	49	79	63			1		204
10.75						16	55	185	184	74	17	2			522
10.50					5	12	176	286	180	58					731
10.25					8	64	407	449	209	44	6				1190
10.00	1	3	6	17	192	438	357	125	10	3					1149
9.75							252	70	12						999
9.50			1	34	240	380	126	32	1	2					805
9.25			8	63	264	309	126	32							447
9.00			5	68	176	131	36	6	3						225
8.75			8	61	82	58	13	3							177
8.50	3	16	62	56	34	5	1								48
8.25	1	6	16	20	2	1									24
8.00		6	8	7	2	1									17
7.75	1	7	6	3											1
7.50															1
7.25	1														1
TOTAL	8	66	368	1122	2019	1768	937	301	64	9	1		1		6682

FOOT CIRC(IN)

1966 ARMY MEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

INSTEP CIRC 10.46 0.65 0.669 = (0.744)*FOOT CIRC(IN)+(3.13) 0.48

FOOT CIRC 9.85 0.58 0.669 = (0.601)*INSTEP CIRC(IN)+(3.57) 0.43

TABLE 62

A BIVARIATE FREQUENCY TABLE FOR
INSTEP CIRC AND FOOT CIRC
1977 ARMY WOMEN

INSTEP CIRC(IN)											
7.50	8.00	8.50	9.00	9.50	10.00	10.50	11.00	TOTAL			
10.75											
10.50											
10.25											
10.00											
9.75											
9.50											
9.25											
9.00											
8.75											
8.50											
8.25											
8.00											
7.75											
7.50											
TOTAL	4	63	353	538	275	82	15				1330

1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
INSTEP CIRC	9.24	0.50	0.780	$= (0.862) * \text{FOOT CIRC(IN)} + (1.57)$	0.31
FOOT CIRC	8.90	0.45	0.780	$= (0.705) * \text{INSTEP CIRC(IN)} + (2.38)$	0.28

TABLE 63

A BIVARIATE FREQUENCY TABLE FOR
INSTEP CIRC AND HEEL-ANKLE CIRC
1966 ARMY MEN

	8.00	8.50	9.00	9.50	10.00	10.50	11.00	11.50	12.00	12.50	13.00	13.50	14.00	14.50	TOTAL
HEEL-ANKLE CIRC(IN)															
16.00									1	2	1				4
15.75							1	3	1	1	1				8
15.50							1	4	4	3	2				14
15.25							4	17	19	8	2		1		52
15.00						1	23	35	23	9	3				96
14.75						3	50	69	34	11					174
14.50						10	50	69	34	11					174
14.25					4	45	141	117	66	11					384
14.00				4	26	103	189	158	60	9					649
13.75			1	11	36	206	232	172	53	4					713
13.50		4	11	107	359	337	181	28	3						1030
13.25		2	19	142	381	309	104	7							964
13.00	1	5	49	242	385	250	45	4	2						983
12.75		9	83	240	252	161	13								768
12.50	2	8	75	153	155	70	14								477
12.25		7	51	93	75	14	5	1	1						247
12.00	3	10	38	60	33	6									160
11.75		12	16	18	10										56
11.50	1	4	8		1										14
11.25		4		2	1										7
11.00	1			1											2
TOTAL	8	66	366	1122	2019	1788	937	301	64	9	1		1		6682

HEEL-ANKLE CIRC(IN)

1966 ARMY MEN

MEAN

ST DEV

R

REGRESSION EQUATIONS

STD ERROR

INSTEP CIRC

10.46

0.65

0.635

=

(0.631)*HEEL-ANKLE CIRC(IN)+(1.98)

HEEL-ANKLE CIRC

13.43

0.65

0.635

=

(0.639)*INSTEP CIRC(IN)+(6.75)

STD ERROR

0.50

0.50

TABLE 64

A BIVARIATE FREQUENCY TABLE FOR
INSTEP CIRC AND HEEL-ANKLE CIRC
1977 ARMY WOMEN

INSTEP CIRC(IN)											
7.50	8.00	8.50	9.00	9.50	10.00	10.50	11.00	TOTAL			
14.25								1			1
14.00						1	2				3
13.75					2	6	3				11
13.50				1	6	11	4				22
13.25				4	25	17	2				48
13.00			1	30	39	35	3				108
12.75			1	55	82	8					146
12.50		1	18	89	54	4					166
12.25		1	44	160	53						258
12.00		4	87	103	10						204
11.75		8	89	72	3						172
11.50		25	74	19	1						119
11.25		12	31	5							49
11.00	1	9	4								15
10.75	2	3									8
10.50	1	3	4								
TOTAL	4	63	353	538	275	82	15				1330

1977 ARMY WOMEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

INSTEP CIRC 9.24 0.50 0.804 = (0.698)*HEEL-ANKLE CIRC(IN)+(0.78) 0.30

HEEL-ANKLE CIRC 12.12 0.57 0.804 = (0.926)*INSTEP CIRC(IN)+(3.56) 0.34

TABLE 65

A BIVARIATE FREQUENCY TABLE FOR
PALM LENGTH AND HAND LENGTH
1966 ARMY MEN

		PALM LENGTH(IN)											TOTAL
		3.00	3.25	3.50	3.75	4.00	4.25	4.50	4.75	5.00	5.25	5.50	
HAND LENGTH(IN)	9.50											1	1
	9.25									3		3	6
	9.00								1	4		3	8
	8.75							3	15	20		3	41
	8.50							27	70	23		1	121
	8.25					18		190	180	26		1	416
	8.00					9	214	686	180	3			1092
	7.75					4	56	704	34	3			1509
	7.50					12	286	960	332	6			1696
	7.25					73	587	634	48	1			1343
	7.00					5	119	248	57	1			430
	6.75					6	49	35					91
	6.50	1				3	17	7					29
	6.25					1							1
	6.00												
TOTAL		1	15	273	1226	2589	1995	487	82	12			6682

STD ERROR
0.14
0.22

1966 ARMY MEN
PALM LENGTH
HAND LENGTH

MEAN
4.17
7.49

ST DEV
0.25
0.38

R
0.822
0.822

REGRESSION EQUATIONS
= (0.537)*HAND LENGTH(IN)+(0.15)
= (1.260)*PALM LENGTH(IN)+(2.24)

TABLE 65

A BIVARIATE FREQUENCY TABLE FOR
PALM LENGTH AND HAND LENGTH
1977 ARMY WOMEN

HAND LENGTH (IN)	PALM LENGTH (IN)											TOTAL
	3.00	3.25	3.50	3.75	4.00	4.25	4.50	4.75	5.00	5.25	5.50	
8.25								1				1
8.00							9	1				10
7.75						27	28	1				56
7.50					4	82	30					116
7.25				1	128	149	3					281
7.00				20	274	45						339
6.75				145	169	1						315
6.50			11	147	18							176
6.25			10	21								31
6.00	1	3	1									5
5.75												
TOTAL	1	24	335	593	304	70	3					1330

1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
PALM LENGTH	3.89	0.21	0.908	$= (0.526) * \text{HAND LENGTH (IN)} + (0.28)$	0.09
HAND LENGTH	6.87	0.36	0.908	$= (1.567) * \text{PALM LENGTH (IN)} + (0.77)$	0.15

TABLE 67

A BIVARIATE FREQUENCY TABLE FOR
SHOULDER CIRC AND WEIGHT
1966 ARMY MEN

SHOULDER CIRC(IN)																								
36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0	54.0	55.0	56.0	57.0	TOTAL		
280.0																					1	1		
275.0																								
270.0																					1	1	3	
265.0																1								
260.0																3	1						4	
255.0																	1						1	
250.0																							7	
245.0															2	3	1		1				9	
240.0												2		1	2	3	2	2	1		1		11	
235.0												2		2	1	4	4	2	2				19	
230.0													4	1	7	2		1					13	
225.0											1			1	3	3	1	1	2				21	
220.0										1				4	4	3							43	
215.0										1	1	4	10	13	4	8	2						57	
210.0									2	1	3	4	16	14	9	8							71	
205.0									2	1	1	18	15	17	12	5							98	
200.0							1		4	8	17	19	26	11	9	2	1	1					121	
195.0							1	1	11	16	22	36	17	12	3	2							161	
190.0							2	5	14	31	40	38	23	6	4								200	
185.0							1	4	8	32	33	70	36	9	6	2							245	
180.0								8	10	43	72	62	37	9	2	2							313	
175.0							1	5	20	54	91	111	70	21	3	1							378	
170.0								9	43	100	122	102	41	8	4	1							434	
165.0								25	77	170	169	71	22	8									552	
160.0							4	44	118	186	148	61	19	2									584	
155.0							3	30	78	190	209	119	38	7	2								680	
150.0							3	12	50	133	182	156	75	18	1								630	
145.0								22	59	135	177	107	19	6	2								531	
140.0								25	114	165	129	54	15	5									518	
135.0								11	54	99	131	47	17	2	1								363	
130.0								1	16	49	110	66	17	4	2	2							267	
125.0								2	6	24	54	60	25	8	4	1							185	
120.0								14	23	31	20	5	1										95	
115.0								1	4	5	8	7	1										26	
110.0								5	9	6	1												22	
105.0								2	1	4	2												10	
100.0								1															3	
95.0																								
TOTAL	3	6	38	108	280	570	828	1034	1131	934	685	454	290	140	80	49	17	9	7	1	3		6677	

1966 ARMY MEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

SHOULDER CIRC 44.55 2.51 0.844 = (0.091)*WEIGHT(LB)+(30.08) 1.35

WEIGHT 159.10 23.35 0.844 = (7.838)*SHOULDER CIRC(IN)+(-190.11) 12.52

TABLE 68

A BIVARIATE FREQUENCY TABLE FOR
SHOULDER CIRC AND WEIGHT
1977 ARMY WOMEN

WEIGHT(LB)	SHOULDER CIRC(IN)																			TOTAL
	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	48.0	49.0	50.0		
220.0														1					1	
215.0																	1		1	
210.0																			1	
205.0												1					1		2	
200.0																			1	
195.0														1					5	
190.0												3		1		1				
185.0																				
180.0										2	1	2	1	1	1				8	
175.0										2	2	1	1	2	2				10	
170.0										2	3	3		1					9	
165.0										1	1	5	6	3					16	
160.0								4	4	8	7	7							30	
155.0								4	8	19	15	10	1						58	
150.0							3	6	13	14	18	6	1	1					62	
145.0								7	15	27	23	18	6						97	
140.0							1	12	26	30	29	14	2						114	
135.0					1		4	16	38	50	19	5	3						136	
130.0								13	27	46	31	22	3						142	
125.0							1	18	33	48	29	8	1						138	
120.0							2	3	42	51	45	11	3						157	
115.0	1						1	13	31	32	12	4							94	
110.0							4	25	42	20	4								95	
105.0							6	16	28	14									63	
100.0							1	11	17	13	3								45	
95.0							4	11	9	5	1								30	
90.0							3	3	3	2									11	
85.0							1	2	1										4	
TOTAL	1	9	38	89	200	219	248	209	152	92	50	8	7	3	2	2			1330	

WEIGHT(LB)

1977 ARMY WOMEN

MEAN

39.51

ST DEV

2.11

R

0.833

REGRESSION EQUATIONS

SHOULDER CIRC = (0.094)*WEIGHT(LB)+(27.09)

STD ERROR

1.17

WEIGHT

132.11

18.76

0.833

= (7.414)*SHOULDER CIRC(IN)+(-160.82)

10.38

TABLE 69

A BIVARIATE FREQUENCY TABLE FOR
STATURE AND BUST/CHEST CIRC
1966 ARMY MEN

	59.0	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	TOTAL
49.0											1			1	1		1					4
48.0									1		2	2	3	3	2							13
47.0										2	2	2	2	1	1				1			11
46.0	1										1	4	2	1	6	1						22
45.0								1	5		1	6	7	1	2	2	2	1				33
44.0						1	1	3	4	10	10	11	12	3	6	4	1	3	1			70
43.0						1	1	6	10	7	22	19	16	20	14	7	1	3	2			130
42.0						1	2	6	10	23	26	30	26	21	12	14	8	1	1			188
41.0		1				4	3	8	9	23	26	30	26	21	12	14	8	1	1			339
40.0						6	4	23	25	40	33	47	55	34	43	17	8	3	1			518
39.0						7	10	26	48	66	69	92	68	52	36	23	12	7	2			712
38.0						4	7	11	38	71	97	119	95	92	64	41	23	8	1	1		911
37.0						2	4	17	27	58	99	106	141	158	112	89	53	29	7	4	5	1082
36.0						1	3	8	13	32	71	101	159	163	149	123	100	62	28	1	1	1111
35.0						4	3	7	12	16	42	81	151	206	176	145	123	76	41	27	2	796
34.0						2	6	12	19	27	58	82	116	118	134	109	74	51	33	12	2	478
33.0						3	5	8	16	27	32	32	32	36	24	16	6	8	2			217
32.0						1	1	3	8	3	9	11	9	8	7	1						63
31.0							2	2	1	3	3	1										16
30.0																						1
29.0																						1
28.0																						1
TOTAL	1	9	32	58	136	236	476	761	970	1043	937	773	544	372	199	87	39	11	9	1		6882

BUST/CHEST CIRC(IN)

STATURE(IN)

1966 ARMY MEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
STATURE	68.71	2.60	0.245	$= (0.242)*BUST/CHEST CIRC(IN) + (59.77)$	2.52
BUST/CHEST CIRC	36.92	2.63	0.245	$= (0.248)*STATURE(IN) + (19.88)$	2.55

A BIVARIATE FREQUENCY TABLE FOR
STATURE AND BUST/CHEST CIRC
1977 ARMY WOMEN

BUST/CHEST CIRCUM

STD ERROR

TABLE 71
A BIVARIATE FREQUENCY TABLE FOR
STATURE AND HIP BREADTH
1966 ARMY MEN

HIP BREADTH (IN)	STATURE (IN)																				TOTAL
	59.0	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0
18.0														1							1
17.5								1													2
17.0													1								1
16.5									1						4	1		1			10
16.0										1	5	6	3	3	2	1	2		2		26
15.5												4	10	7	9	6	3	5	1		64
15.0														27	20	28	14	4			203
14.5	1													78	61	38	15	8	3	1	506
14.0														104	100	62	22	8	3		1018
13.5														153	92	36	18	8	1	2	1491
13.0														122	67	28	10	5	1		1784
12.5														70	40	16	8				1104
12.0														6	4		2				389
11.5																					74
11.0																					10
10.5																					
TOTAL	1	9	32	58	135	235	476	751	970	1043	937	773	544	372	199	97	39	11	9	1	6682

1966 ARMY MEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR
STATURE 68.71 2.60 0.437 = (1.440)*HIP BREADTH(IN)+(49.89) 2.34
HIP BREADTH 13.07 0.79 0.437 = (0.133)*STATURE(IN)+(3.93) 0.71

TABLE 72

A BIVARIATE FREQUENCY TABLE FOR
STATURE AND HIP BREADTH
1977 ARMY WOMEN

STATURE(IN)																				TOTAL
55.0	57.0	58.0	59.0	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0	72.0	73.0			
19.5															1				1	
19.0																				
18.5																				
18.0																			1	
17.5									1										1	
17.0									3	1									10	
16.5									2	1									14	
16.0									3	2	1								47	
15.5									8	3	9	6			3		1		102	
15.0					2				16	11	17	10	18	10	6	2			166	
14.5					1	9			23	27	31	17	14	9	6	2	4		249	
14.0					4	8			36	38	43	25	24	13	2	4	2		296	
13.5	1	1	2		2	23			51	46	47	23	13	8	3	3			223	
13.0		1	4	9	13	33			34	34	23	18	5	2	6				142	
12.5		2	4	8	15	21			18	18	17	10	6	1					58	
12.0		1	6	7	9	12			2	8	1								16	
11.5			1	2	4	3			3		2								4	
11.0						1														
TOTAL	1	7	18	35	60	122	189	194	191	193	115	90	50	27	11	6	1		1330	

1977 ARMY WOMEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

STATURE 64.15 2.57 0.398 $= (1.059) * \text{HIP BREADTH}(\text{IN}) + (49.41)$ 2.35

HIP BREADTH 13.92 0.96 0.398 $= (0.149) * \text{STATURE}(\text{IN}) + (4.36)$ 0.88

TABLE 73

A BIVARIATE FREQUENCY TABLE FOR
STATURE AND HIP CIRC
1966 ARMY MEN

	59.0	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	TOTAL
STATURE(IN)										1												1
53.0																						
54.0																						
55.0																						
56.0																						
57.0																						
58.0																						
59.0																						
60.0																						
61.0																						
62.0																						
63.0																						
64.0																						
65.0																						
66.0																						
67.0																						
68.0																						
69.0																						
70.0																						
71.0																						
72.0																						
73.0																						
74.0																						
75.0																						
76.0																						
77.0																						
78.0																						
79.0																						
TOTAL	1	9	32	58	135	235	476	751	970	1043	937	773	544	372	199	87	39	11	9	1		6882

HIP CIRC(IN)

1966 ARMY MEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

STATURE 68.71 2.60 0.350 = (0.370)*HIP CIRC(IN)+(54.98) 2.44

HIP CIRC 37.09 2.46 0.350 = (0.330)*STATURE(IN)+(14.42) 2.30

A BIVARIATE FREQUENCY TABLE FOR
STATURE AND HIP CIRC
1977 ARMY WOMEN

HIP CIRC(IN)

1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
STATURE	64.15	2.57	0.414	= (0.429)*HIP CIRC(IN)+(48.03)	2.34
HIP CIRC	37.59	2.48	0.414	= (0.400)*STATURE(IN)+(11.93)	2.26

TABLE 75

A BIVARIATE FREQUENCY TABLE FOR
STATURE AND SHOULDER CIRC
1966 ARMY MEN

	59.0	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	TOTAL
SHOULDER CIRC(IN)	57.0									2			1									3
56.0										1		2		1					1			1
55.0											1											7
54.0											1	3	1	1	2							9
53.0									1				7	2		2						17
52.0								1	1	2			6	1		6	3					49
51.0								1	2	3	3	6	9	8	9	4	2	3	3			80
50.0	1					1		1	5	6	8	14	16	8	8	4	2					140
49.0						2	2	6	8	12	14	20	22	19	15	11	5	3	2	1		290
48.0						4	3	13	17	34	36	43	44	43	29	13	9	2	1			484
47.0						1	1	6	18	38	52	66	71	65	37	24	14		2			685
46.0						1	1	3	9	14	36	66	86	88	63	49	33	18	8	1		995
45.0						1	5	15	32	64	85	130	127	156	116	83	60	32	13	11	3	1132
44.0						6	6	24	24	76	136	172	199	152	142	89	56	38	7	4	2	1036
43.0						5	7	13	39	66	140	166	182	145	111	94	48	18	6	4	1	829
42.0						2	4	6	14	35	83	110	128	108	79	49	33	13	4			570
41.0						6	16	23	43	81	104	83	69	54	26	16	3	1	1	1		280
40.0						3	5	13	21	27	41	47	48	35	18	8	1	1				108
39.0						2	4	6	9	16	17	17	13	6	5	2						98
38.0						2	1	6	3	4	10	9	2	1								6
37.0									1							1						3
36.0																						8682
TOTAL	1	9	32	58	135	235	476	751	970	1043	937	773	544	372	199	87	39	11	9	1		

1966 ARMY MEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

STATURE 68.71 2.60 0.297 = (0.308)*SHOULDER CIRC(IN)+(54.98) 2.48

SHOULDER CIRC 44.55 2.51 0.297 = (0.287)*STATURE(IN)+(24.83) 2.40

TABLE 76

A BIVARIATE FREQUENCY TABLE FOR
STATURE AND SHOULDER CIRC
1977 ARMY WOMEN

STATURE (IN)																			
56.0	57.0	58.0	59.0	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0	72.0	73.0	TOTAL	
49.0										1			1					2	
48.0								1			1							2	
47.0								2							1			3	
46.0							1	1		1	1	1	1	1				7	
45.0									2		2	2	1		1			8	
44.0									11	9	6	5	3	2	1	1		50	
43.0				1	2	6	11	9	8	19	12	9	6	2	4	2		92	
42.0						8	17	21	23	30	12	14	11	6	1			162	
41.0				1	1	8													
		1	3	1	5	14	38	24	29	32	23	22	9	6	1			209	
40.0																			
	1	1	2	4	11	18	34	49	36	46	17	16	6	4	2	1		248	
39.0		2	3	7	17	23	29	33	32	32	20	11	5	2		2	1	219	
38.0																			
		2	10	19	27	34	31	33	15	14	9	3	3	3				200	
37.0																			
		6	6	11	17	11	12	12	6	7				1				69	
36.0																			
		1	1	4	6	8	8	5		1	1							39	
36.0																			
34.0																			
33.0																			
TOTAL	1	7	18	35	60	122	189	194	191	193	115	90	50	27	11	6	1	1330	

SHOULDER CIRC(IN)

1977 ARMY WOMEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

STATURE 64.15 2.57 0.331 = (0.404)*SHOULDER CIRC(IN)+(48.19) 2.42

SHOULDER CIRC 39.51 2.11 0.331 = (0.272)*STATURE(IN)+(22.06) 1.99

TABLE 77

A BIVARIATE FREQUENCY TABLE FOR
STATURE AND SLEEVE INSEAM
1966 ARMY MEN

	59.0	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	TOTAL
24.0													1									1
23.5																2						2
23.0															1	1	1	3	1	1		8
22.5															2	5	7	4	2	1		25
22.0										1	1	2			11	16	11	2	1	1		60
21.5										2	9	6	8	26	39	57	28	7	4	4	1	169
21.0										2	8	40	57	83	73	57	28	7	2	1		382
20.5								1	3	8	22	40	57	83	73	57	28	7	2	1		692
20.0								6	20	36	70	104	150	133	96	53	10	10	1	1		1084
19.5							4	9	31	111	186	227	217	156	86	29	8					1226
19.0						2	11	42	109	177	288	281	161	93	48	10	4					1299
18.5					3	11	43	102	189	308	280	193	118	34	15	2	1					799
18.0					7	19	62	124	203	185	115	56	26	10	1							555
17.5					8	39	65	118	123	105	58	21	9	1								282
17.0					4	12	41	37	51	29	10	3	1									98
16.5					2	6	14	17	18	15	4	3	2									26
16.0					1	4	3	5	3	1	1	1										15
15.5					1	1	3	2	2	1												6092
TOTAL	1	9	32	58	135	235	476	761	970	1043	937	773	544	372	199	87	39	11	9	1		

SLEEVE INSEAM (IN)

1966 ARMY MEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

STATURE 68.71 2.60 0.732 = (1.806)*SLEEVE INSEAM(IN)+(34.16) 1.77

SLEEVE INSEAM 19.13 1.05 0.732 = (0.296)*STATURE(IN)+(-1.21) 0.72

TABLE 78

A BIVARIATE FREQUENCY TABLE FOR
STATURE AND SLEEVE INSEAM
1977 ARMY WOMEN

STATURE(IN)																				TOTAL
56.0	57.0	58.0	59.0	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0	72.0	73.0	74.0		
21.5															1		1		2	
21.0												2	3				2		7	
20.5										1			1	2	7	4	2		17	
20.0										5	2	6	7	4	6	3	1		34	
19.5										1	4	6	15	21	25	17	5	3	97	
19.0										3	11	11	18	38	27	25	17	6	166	
18.5										8	22	29	32	48	29	15	4	2	190	
18.0										1	3	11	39	64	54	20	13	3	283	
17.5										4	3	19	33	54	47	27	10	2	247	
17.0										10	23	39	36	24	26	7	2		186	
16.5										3	3	13	25	17	12	3	2		103	
16.0										7	8	8	3	9	3				38	
15.5										2	1	1	1						6	
15.0										2	2								4	
14.5																			1	
14.0																				
TOTAL	1	7	18	35	80	122	189	194	191	193	115	90	50	27	11	6	1		1330	

1977 ARMY WOMEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

STATURE 64.15 2.57 0.746 = (1.860)*SLEEVE INSEAM(IN)+(31.16) 1.71

SLEEVE INSEAM 17.74 1.03 0.746 = (0.299)*STATURE(IN)+(-1.44) 0.69

TABLE 79

A BIVARIATE FREQUENCY TABLE FOR
STATURE AND UPPER THIGH CIRC
1966 ARMY MEN

	59.0	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	TOTAL
31.0												1										1
30.0														1	2							4
29.0											3	1		1	3				1			10
28.0																						26
27.0				1			2	2	2	7	6	22	20	14	7	2	2	1				100
26.0							4	6	12	21	35	34	33	33	21	18	8	2	1	1		233
25.0	1				1	7	8	29	42	57	77	71	71	46	37	24	16	8	1			495
24.0				2	1	15	23	51	72	96	114	147	109	76	59	34	11	5	1	1		816
23.0				4	9	23	30	95	147	180	203	165	155	105	74	42	20	4	1	5		1262
22.0				3	7	10	19	45	97	162	213	223	188	172	112	75	32	9	6	2	1	1378
21.0				3	6	16	29	48	92	154	202	218	180	112	90	59	30	9	4	3		1254
20.0				1	4	12	27	48	66	109	129	112	78	69	47	22	12	7	4	1		748
19.0				2	7	7	10	21	29	31	48	40	38	26	15	5	4					283
18.0				1	2	1	5	4	11	11	9	9	3	3								59
17.0							2	4	1	4	1											12
16.0																						1
TOTAL	1	9	32	58	135	235	476	761	970	1043	937	773	644	372	198	87	39	11	9	1		6682

UPPER THIGH CIRC(IN)

STATURE(IN)

1966 ARMY MEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

STATURE 68.71 2.60 0.219 = (0.302)*UPPER THIGH CIRC(IN)+(62.12) 2.54

UPPER THIGH CIRC 21.82 1.89 0.219 = (0.159)*STATURE(IN)+(10.90) 1.84

TABLE 80
A BIVARIATE FREQUENCY TABLE FOR
STATURE AND UPPER THIGH CIRC
1977 ARMY WOMEN

	56.0	57.0	58.0	59.0	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0	72.0	73.0	TOTAL
UPPER THIGH CIRC(IN)	23.0	24.0	25.0	26.0	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0
1									1	1	1	2	5	7	4				4
2								1	6	5	2	5	7	7	4	2	3		10
3								4	5	5	7	7	7	4	2	3			26
4								6	16	17	30	12	14	10	3				49
5								14	34	38	45	24	25	11	5	3	1	1	136
6								34	59	50	39	26	9	11	10	3			253
7								27	30	49	34	18	18	7	4	2			313
8								18	28	16	27	15	7	3	2				253
9								15	12	11	10	6	5	3					163
10								8	15	12	11	10	5	3					88
11								6	3	2	4	7	1	1					27
12								1	1	1	1	1							7
13																			1
14																			
15																			
16																			
TOTAL	1	7	18	35	80	122	189	194	191	193	115	90	50	27	11	6	1		1330

1977 ARMY WOMEN MEAN ST DEV .R REGRESSION EQUATIONS STD ERROR
 STATURE 64.15 2.57 0.287 = (0.411)*UPPER THIGH CIRC(IN)+(54.95) 2.46
 UPPER THIGH CIRC 22.40 1.79 0.287 = (0.200)*STATURE(IN)+(9.57) 1.72

A BIVARIATE FREQUENCY TABLE FOR
STATURE AND WEIGHT
1966 ARMY MEN

1966 ARMY MEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
STATURE	68.71	2.60	0.489	$= (0.054) * \text{WEIGHT}(\text{LB}) + (60.12)$	2.27
WEIGHT	159.10	23.35	0.489	$= (4.388) * \text{STATURE}(\text{IN}) + (-142.39)$	20.37

TABLE 82

A BIVARIATE FREQUENCY TABLE FOR
STATURE AND WEIGHT
1977 ARMY WOMEN

	56.0	57.0	58.0	59.0	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0	72.0	73.0	TOTAL
220.0															1				1
215.0											1								1
210.0								1											1
205.0												1							2
200.0											1								1
195.0								2			2								5
190.0																			
185.0								1		1			1	4					8
180.0								1		5			3			1			10
175.0								1		1			2						9
170.0								1		1			4				1		16
165.0								1		4			8						30
160.0					1			3		6			9						58
155.0						1		4		8			7						62
150.0						1		5		10			9						97
145.0						3		13		16			13						114
140.0						2		21		22			12						136
135.0					1	2		24		27			12						142
130.0					1	6		25		29			10						138
125.0					2	15		32		32			10						157
120.0					4	6		27		25			6						94
115.0					3	9		12		11			3						95
110.0					3	10		13		15			2						63
105.0					3	6		10		9			1						45
100.0					2	6		7		7									30
95.0					4	6		6		1									11
90.0					2	2		4		2									4
85.0					1	1		1											
TOTAL	1	7	18	35	80	122	189	194	191	193	115	90	60	27	11	6	1		1330

(LB) HEIGHT

1977 ARMY WOMEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

STATURE 64.15 2.57 0.536 = (0.073)*WEIGHT(LB)+(54.51) 2.17

WEIGHT 132.11 18.76 0.536 = (3.916)*STATURE(IN)+(-119.12) 15.84

TABLE 83

A BIVARIATE FREQUENCY TABLE FOR
UPPER THIGH CIRC AND WEIGHT
1966 ARMY MEN

UPPER THIGH CIRC(IN)																			
15.0	16.0	17.0	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0	27.0	28.0	29.0	30.0	31.0	TOTAL		
280.0														1			1		
276.0																			
270.0											1	1			1		3		
266.0													1				1		
260.0												2	1		1		4		
256.0																			
250.0															1		1		
246.0												1	4	2			7		
240.0									1	2	2	2	2	1	1		9		
236.0								1		2	3	3	3	2			11		
230.0								1	3	4	6	6	4	1			19		
226.0									2	6	4	4	1				13		
220.0								1	3	11	3	3	1	1			21		
216.0								2	7	20	10	10	1	1			43		
210.0					1	1	4	2	14	16	17	17	2	1			57		
206.0							3	9	25	19	12	12	2	1			71		
200.0						2	2	16	31	33	13	13	1				98		
196.0						1	7	32	42	28	8	3					121		
190.0					2	2	19	46	53	27	12						161		
186.0					3	6	35	59	73	23							200		
180.0					1	2	7	61	100	66	16	3					245		
176.0						4	23	88	114	70	13	1					313		
170.0					1	8	42	134	133	50	9						378		
166.0						1	21	100	179	102	30						434		
160.0					6	47	164	214	102	17	3						552		
156.0					2	8	93	226	194	51	7						584		
150.0					2	29	171	258	191	28		1					680		
146.0					6	58	242	220	87	14							630		
140.0					4	10	89	218	176	32	2						531		
136.0					2	25	154	218	104	14	1						518		
130.0					1	4	50	126	30	3							363		
126.0					1	4	57	136	59	10							267		
120.0					13	58	80	27	5	2							185		
116.0	1	2	13	41	27	11											96		
110.0			5	16	5												26		
106.0		2	6	11	3												22		
100.0		5	2	3													10		
96.0		1	1														3		
TOTAL	1	12	59	282	747	1253	1377	1262	916	495	232	100	26	10	4	1	6677		

1966 ARMY MEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

UPPER THIGH CIRC 21.82 1.89 0.857 = (0.069)*WEIGHT(LB)+(10.84) 0.97

WEIGHT 159.10 23.35 0.857 = (10.598)*UPPER THIGH CIRC(IN)+(-72.16) 12.03

TABLE 84

A BIVARIATE FREQUENCY TABLE FOR
UPPER THIGH CIRC AND WEIGHT
1977 ARMY WOMEN

	16.0	17.0	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0	27.0	28.0	29.0	TOTAL
220.0														1	1
215.0														1	1
210.0															
205.0												1			1
200.0										1					2
195.0												1			1
190.0												1	3	1	5
185.0															
180.0										1	1	1	4	1	8
175.0								1	1		2	6			10
170.0								1	1	1	2	4	1		9
165.0								1	1	6	3	4	1		16
160.0						1	1	4	11	9	4				30
155.0						2	3	9	25	17					58
150.0						1	7	24	22	7	1				62
145.0								19	49	24	4	1			97
140.0								5	26	56	26	3			114
135.0								17	51	58	10				136
130.0						2	32	74	26	9					142
125.0						9	49	62	17	1					138
120.0					1	30	74	45	6	1					157
115.0					6	30	39	16	3						94
110.0					11	54	24	6							95
105.0				3	23	27	9	1							83
100.0				9	27	9									45
95.0			4	7	18	1									30
90.0			2	6	2	1									11
85.0	1	1	2												4
TOTAL	1	7	27	88	163	253	313	253	136	49	26	10	4		1330

WEIGHT(LB)

UPPER THIGH CIRC(IN)

1977 ARMY WOMEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

UPPER THIGH CIRC 22.40 1.79 0.883 = (0.084)*WEIGHT(LB)+(11.30) 0.84

WEIGHT 132.11 18.76 0.883 = (9.243)*UPPER THIGH CIRC(IN)+(-74.95) 8.82

SECTION II

Paired Male and Female Bivariates:
Dimensions Not Comparable

TABLE 85

A BIVARIATE FREQUENCY TABLE FOR
ANKLE CIRC AND WAIST CIRC
1966 ARMY MEN

ANKLE CIRC(IN)																							
7.00	7.25	7.50	7.75	8.00	8.25	8.50	8.75	9.00	9.25	9.50	9.75	10.00	10.25	10.50	10.75	11.00	11.25	11.50	11.75	12.00	TOTAL		
61.00															1						1		
60.00																							
59.00																							
49.00																							
48.00																1					2		
47.00																					3		
46.00																					2		
45.00										1											6		
44.00									1	2											15		
43.00									3	2											20		
42.00									1	4											34		
41.00									9	10											64		
40.00									7	10											71		
39.00									12	13											92		
38.00									25	16											160		
37.00									32	23											192		
36.00									33	27											294		
35.00									74	31											386		
34.00									61	84											486		
33.00									80	73											679		
32.00									135	123											908		
31.00									174	177											988		
30.00									207	207											986		
29.00									176	118											945		
28.00									184	109											696		
27.00									84	26											448		
26.00									30	18											141		
25.00									4	1											43		
24.00									1												7		
23.00																					2		
TOTAL	3	10	42	210	497	695	1201	1137	984	888	483	260	177	72	29	11			2		6681		

STD ERROR

0.49

2.77

REGRESSION EQUATIONS

$$R = (0.089) \text{ANKLE CIRC(IN)} + (6.12)$$

$$R = (2.889) \text{ANKLE CIRC(IN)} + (5.80)$$

R

ST DEV

0.57

3.22

MEAN

8.93

31.61

1966 ARMY MEN

ANKLE CIRC

WAIST CIRC

TABLE 86

A BIVARIATE FREQUENCY TABLE FOR
ANKLE CIRC AND WAIST CIRC
1977 ARMY WOMEN

ANKLE CIRC(IN)																
6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50	8.75	9.00	9.25	9.50	9.75	10.00	TOTAL	
42.00								1	2						3	
41.00										1	1				2	
40.00																
39.00																
38.00																
37.00					1		1				1				3	
36.00							1	1	2	2	1				7	
35.00							3	3	3						9	
34.00			1			2	5	3	5	1	2		1		20	
33.00					3	3	2	2	4	3	1	2			20	
32.00					3	3	6	8	4	2	2	1			30	
31.00			1		6	7	8	10	9	7	4	2	1		55	
30.00				3	5	18	24	18	20	9	3	5			105	
29.00				4	10	13	18	26	30	25	4	5			135	
28.00				5	19	36	40	37	26	20	4	3	1		191	
27.00				6	11	62	42	44	30	15	7		1		213	
26.00	1	1	8	13	23	62	42	40	20	12	6	1	1		220	
25.00			8	22	24	55	28	24	13	4	1				179	
24.00	1	4	8	9	20	30	14	10		2					98	
23.00		1	3	8	7	1	7	5							32	
22.00			2	2	2	1	1								8	
TOTAL	2	6	37	72	134	273	242	232	168	103	37	19	4	1	1330	

(IN)

1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
ANKLE CIRC	8.16	0.49	0.369	= (0.068)*ANKLE CIRC(IN)+(6.26)	0.46
WAIST CIRC	27.94	2.67	0.369	= (2.008)*ANKLE CIRC(IN)+(11.56)	2.48

TABLE 87

A BIVARIATE FREQUENCY TABLE FOR
BUST/CHEST CIRC AND INTERSCYE(BACK)
1966 ARMY MEN

	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	48.0	49.0	TOTAL
20.6										2						1	2		1	1		1	3
19.6										1			3		1	1	2		1	1	3	1	9
19.0										2			4		3	6	3		4	1	1		14
18.6										2	3	1	8		9	9	7		1	1	1		34
18.0								2	2	2	4	8	10		9	9	7	5	1	2			69
17.6					1		1	2	3	10	20	16	27	24	19	19	10	4	5	2	1	2	166
17.0							2	6	16	41	61	66	49	64	36	24	9	6	6	4			369
16.6								18	46	99	80	82	60	67	37	28	20	3	3				548
16.0					1	3	12	61	99	137	140	138	99	67	33	17	8	7	2		2		806
15.6					2	18	34	94	177	202	178	153	97	59	24	13	6	2	2	1	1		1063
15.0					2	21	77	164	228	198	199	127	79	43	18	5	2	2					1163
14.6					7	27	95	140	199	169	108	63	43	15	5	3	1		1				876
14.0				4	16	37	98	131	169	123	68	38	14	6	2	4							698
13.6					9	44	67	101	102	68	23	16	9	2	1								432
13.0	1		4	14	33	62	63	47	34	14	4	4											260
12.6		1	1	6	7	22	27	21	23	6	2	2	1										117
12.0			2	6	8	2	6	5	7														34
11.6					2	3	3	5	2	3													15
11.0						1	1	3															6
10.6									1	1													2
TOTAL	1	1	15	63	217	478	795	1111	1052	911	712	618	339	186	130	70	33	22	11	13	4		6882

INTERSCYE(BACK)(IN)

1966 ARMY MEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

BUST/CHEST CIRC 36.92 2.63 0.587 = (1.244)*INTERSCYE(BACK)(IN)+(17.77) 2.13

INTERSCYE(BACK) 15.39 1.24 0.587 = (0.277)*BUST/CHEST CIRC(IN)+(5.17) 1.01

TABLE 88

A BIVARIATE FREQUENCY TABLE FOR
BUST/CHEST CIRC AND INTERSCYE(BACK)
1977 ARMY WOMEN

BUST/CHEST CIRC(IN)																									
27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	TOTAL				
18.0									1	1		1				2				1	6				
17.5				1				3	2	2		1			2	1		1			13				
17.0					1		2	4	2	6					1	1		1			30				
16.5						7	5	7	23	20	6	3	1	1							103				
16.0							21	24	49	21	20	20	8	2	3						190				
15.5			4	6	14	21	44	39	48	45	26	10	8	4	2						270				
15.0			5	16	25	44	44	39	48	45	26	10	8								264				
14.5			1	6	22	38	47	61	39	29	13	10	5	1		1					245				
14.0		3	3	12	28	38	46	47	31	19	6	7	2	1	2						128				
13.5	1	3	16	18	28	18	9	19	10	1	1	2	2		1						60				
13.0		2	5	10	17	6	4	2	1	1			1	1							24				
12.5			3	5	8	3	4	1													7				
12.0			4		2		1																		
TOTAL	1	3	9	56	105	179	192	193	217	154	93	65	32	11	11	6		2	1	1	1330				

TABLE 89

A BIVARIATE FREQUENCY TABLE FOR
BUST/CHEST CIRC AND NECK CIRC
1966 ARMY MEN

		28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	48.0	49.0	TOTAL
NECK CIRC (IN)	19.5																	1				1		2
	19.0																	1						
	18.5																	1						3
	18.0																							7
	17.5																							
	17.0																							
	16.5																							
	16.0																							
	15.5																							
	15.0																							
	14.5																							
	14.0																							
	13.5																							
	13.0																							
	12.5																							
	12.0																							
	11.5																							
TOTAL		1	1	15	63	217	478	795	1111	1052	911	712	518	338	186	129	70	33	22	11	13	4		6981

STD ERROR

1.96

0.61

REGRESSION EQUATIONS

 $BUST/CHEST = (2.154) * NECK CIRC + (5.21)$ $NECK CIRC = (0.206) * BUST/CHEST + (7.12)$

R

0.666

0.666

ST DEV

2.63

0.81

MEAN

36.91

14.72

1966 ARMY MEN

BUST/CHEST CIRC

NECK CIRC

TABLE 90

A BIVARIATE FREQUENCY TABLE FOR
BUST/CHEST CIRC AND NECK CIRC
1977 ARMY WOMEN

BUST/CHEST CIRC(IN)																										
27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	TOTAL					
16.0								5	2		2	1	1	1		1		1			7					
14.5								8	34	1	7	1	2	3	3			1		1	27					
14.0								27	53	22	12	16	6	3	3		1				119					
13.5				1	5			24	80	38	30	23	19	3	6	2					261					
13.0				4	6			27	83	60	32	22	4	3	1						462					
12.5				10	32	61	75	80	37	31	10	2									317					
12.0	1	5	19	38	54	62	55	37	7	2				1							125					
11.5		2	4	14	22	32	25	17	1												21					
11.0				8	6	5	1														1					
10.5				1																						
TOTAL	1	3	9	56	105	179	192	193	217	164	93	65	32	11	11	5		2	1	1	1330					

TABLE 91

A BIVARIATE FREQUENCY TABLE FOR
BUST/CHEST CIRC AND VTC
1966 ARMY MEN

	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	48.0	49.0	TOTAL
79.0																						1	1
78.0																	1	1	1	2	1		1
77.0															1	1	3	1	1				7
76.0															1	6	1	2	1	1	4	2	11
75.0																4	3	2	3	2	1		20
74.0																	6	4	4	2	2		31
73.0																	13	3	3	2	2		62
72.0																	9	9	8	5	2		87
71.0																	26	15	9	2	1		186
70.0																	39	24	19	2	2		244
69.0																	42	26	17	9	1		368
68.0																	46	17	20	6	4		610
67.0																	60	21	13	6	1		628
66.0																	74	39	16	1	1		794
65.0																	84	49	17	6	1		794
64.0																	116	70	38	22	3		777
63.0																	132	84	49	13	2		681
62.0																	137	93	58	40	13		580
61.0																	145	102	61	34	17		413
60.0																	151	113	74	39	16		227
59.0																	161	123	84	49	17		134
58.0																	174	116	70	38	22		76
57.0																	186	123	84	49	17		34
56.0																	201	137	93	58	40		8
55.0																	216	145	102	61	34		7
54.0																	229	151	113	74	39		2
53.0																	244	161	123	84	49		
TOTAL	1	1	16	63	217	478	796	1111	1062	911	712	618	339	186	130	70	33	22	11	13	4		6682

VTC(IN)

BUST/CHEST CIRC(IN)

1966 ARMY MEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
BUST/CHEST CIRC	36.92	2.63	0.604	$= (0.476) \cdot \text{VTC}(\text{IN}) + (6.16)$	2.10
VTC	64.61	3.34	0.604	$= (0.767) \cdot \text{BUST/CHEST CIRC}(\text{IN}) + (36.29)$	2.66

TABLE 92

A BIVARIATE FREQUENCY TABLE FOR
BUST/CHEST CIRC AND VTC
1977 ARMY WOMEN

	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	TOTAL
72.0																	1					1
71.0																						
70.0												1							1			2
69.0														2	2	2	1					5
68.0							1			1	1		2	3	1				1	1		16
67.0													4	2	1	2						16
66.0								2	2	1	2	4	4	2	1	2		1				38
65.0						1	1	3	5	7	17	15	6	6	2	1	1					67
64.0						2	2	10	14	28	22	12	9	4	3							107
63.0						3	10	16	20	40	30	17	9	3	2	1						151
62.0					3	3	14	25	37	33	26	11	15	4	1	1						173
61.0					5	11	26	28	29	30	16	10	9	4	1							169
60.0					2	6	16	28	38	33	15	11	5	1								194
59.0					1	10	17	33	35	26	19	8	4	1	1							155
58.0					1	8	25	23	13	10	8		1									112
57.0	1	1	1	1	5	8	22	5	4	3		1										51
56.0					7	12	9	4	2	4	1	1										41
55.0					1	6	2	2	1													14
54.0			1	2	3	2	3															11
53.0			1		1	2	1															5
52.0					2																	2
51.0																						
TOTAL	1	3	9	56	105	178	192	193	217	154	93	65	32	11	11	5		2	1	1		1330

VTC(IN)

1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
BUST/CHEST CIRC	34.72	2.49	0.616	$= (0.541) * VTC(IN) + (1.96)$	1.96
VTC	60.56	2.84	0.616	$= (0.702) * BUST/CHEST CIRC(IN) + (36.19)$	2.24

TABLE 93

A BIVARIATE FREQUENCY TABLE FOR
BUST/CHEST CIRC AND WAIST BACK
1966 ARMY MEN

	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	48.0	49.0	TOTAL
23.0								1	1	4				1	1	1				1		1
22.5								1	1	3			1	2	1						1	10
22.0							1	1	4	1	3		1	5	1	2	1		1			11
21.5						1	1	4	5	11	15	3	13	8	4	3	2			1		32
21.0					1	5	6	22	19	35	22	27	16	7	8	8	2					96
20.5				1		7	6	26	31	66	41	44	30	28	9	14	4	2	2			182
20.0				1		9	26	31	66	41	44	30	28	9	14	10	4	2	1		2	307
19.5																						546
19.0				3	8	34	47	82	89	83	61	50	34	14	19	8	6	1	3	3	1	839
18.5				1	3	19	39	77	144	139	124	106	76	45	40	8	7	2	1	1		761
18.0				2	4	21	42	86	130	122	115	76	57	45	22	13	7	5	2	2	1	874
17.5				1	4	24	56	126	134	140	126	97	72	45	21	16	6	4	2	1		944
17.0				4	8	31	78	130	167	144	101	108	71	42	25	21	8	1	3	2	2	904
16.5				1	13	32	71	95	163	132	124	65	50	26	18	13	5	3	2	1	1	634
16.0				1	1	31	59	96	119	93	72	68	36	28	11	6	2	1	3			373
15.5				8	22	35	66	66	52	43	31	26	9	5	6	3	1	1				181
15.0	1			4	6	16	22	23	43	25	22	10	4	3	2							62
14.5				3	7	13	8	6	12	1	6	4	1		1							32
14.0				1	1	4	7	5	4	1	1	2	1	1								4
13.5																						
TOTAL	1	1	15	63	217	478	796	1111	1062	911	712	618	399	186	130	70	33	22	11	13	4	6882

BUST/CHEST CIRC(IN)
WAIST BACK (IN)

1966 ARMY MEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR
 BUST/CHEST CIRC 36.92 2.63 0.245 = (0.475)*BUST/CHEST CIRC (IN)+(28.49) 2.55
 WAIST BACK 17.73 1.35 0.245 = (0.126)*BUST/CHEST CIRC (IN)+(13.08) 1.31

A BIVARIATE FREQUENCY TABLE FOR
BUST/CHEST CIRC AND WAIST BACK
1977 ARMY WOMEN

BUST/CHEST CIRC(IN)																							
27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	TOTAL		
20.5									1						1						1		
20.0									2	1											3		
19.5																					4		
19.0					1			1								2					14		
18.5				2		1	4	4	1			1				1					31		
18.0			1	2	5	2	4	5	2		2	3	4								71		
17.5		1	1	3	11	9	7	8	1		8	2	3	1			1				108		
17.0	1		4	6	11	18	15	15	17		7	6	4		2	1				1	213		
16.5			1	3	16	29	25	38	40	28	11	9	4	3	3	1		1			245		
16.0			1	10	17	32	44	36	38	25	16	13	9	2	2						239		
15.5				12	20	24	38	36	46	26	20	11	1	3	2						201		
15.0			1	10	16	35	29	23	27	25	18	10	5	1	1						127		
14.5		2	3	8	19	16	20	22	14	7	6	1	1								55		
14.0		1	2	5	6	10	8	4	7	3	4	4	1								16		
13.5				1	4	1	2	4	2	1											3		
13.0				1		1																	
TOTAL	1	3	9	56	105	179	192	193	217	154	93	65	32	11	11	5		2	1	1	1330		

1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
BUST/CHEST CIRC	34.72	2.49	0.153	= (0.367)*WAIST BACK (IN)+(28.82)	2.46
WAIST BACK	16.08	1.04	0.153	= (0.064)*BUST/CHEST CIRC(IN)+(13.86)	1.03

TABLE 95

A BIVARIATE FREQUENCY TABLE FOR
BUST/CHEST CIRC AND WAIST CIRC
1966 ARMY MEN

	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	48.0	49.0	TOTAL
61.0																						1	1
60.0																							
59.0																							
49.0																							
48.0																							
47.0																1			1		2		2
46.0																							
45.0																							
44.0																1			1		1		2
43.0																							8
42.0																3	1	1	4	2	3	1	16
41.0																1	6	1	3	2	1		20
40.0																3	9	6					34
39.0																8	11	8	3	1	1		64
38.0																6	6	5	3				71
37.0																11	7	2	1	1	1		92
36.0																17	7	2	1	1			160
35.0																21	4	3	2				192
34.0																27	4	3	2				294
33.0																34	5	2	1				386
32.0																46	3						486
31.0																6	2						679
30.0																10	1						908
29.0																13							986
28.0																18							945
27.0																27							695
26.0																37							446
25.0																48							141
24.0																67							43
23.0																89							7
TOTAL	1	1	15	63	217	478	796	1111	1062	911	712	518	339	195	130	70	33	22	11	13	4		6681

1966 ARMY MEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

BUST/CHEST CIRC 36.91 2.63 0.814 = (0.665)*BUST CIRC(IN)+(15.89) 1.53

WAIST CIRC 31.61 3.22 0.814 = (0.996)*BUST/CHEST CIRC(IN)+(-5.16) 1.87

TABLE 96

A BIVARIATE FREQUENCY TABLE FOR
BUST/CHEST CIRC AND WAIST CIRC
1977 ARMY WOMEN

BUST/CHEST CIRC(IN)																							
27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	TOTAL		
42.0																1			1	1	3		
41.0																		2			2		
40.0																							
39.0																							
38.0												1			2						3		
37.0											2			2	2	1					7		
36.0										2		1	1	2	1	2					9		
36.0									1		3	6	6	3	3	1					20		
34.0									2		2	8	3	2	3						20		
33.0											6	8	6	1							30		
32.0								1	4	4	14	12	7	2							56		
31.0					1	1	2	3	13	13	18	11	3	1							105		
30.0					3	7	10	27	26	18	11	3	1								136		
29.0					2	1	10	14	36	18	14	3	1								191		
28.0			1	2	3	14	18	36	55	40	16	3	2								213		
27.0				1	13	29	36	65	47	21	9	1	1								220		
26.0				4	18	52	66	49	31	8	2										179		
26.0			1	15	34	39	53	20	11	5	1										98		
26.0			2	1	16	27	35	10	7												32		
24.0			6	13	7	5	1														8		
23.0		1		6	1																		
22.0																							
TOTAL	1	3	9	56	105	179	192	193	217	154	93	65	32	11	11	5		2	1	1	1330		

1977 ARMY WOMEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

BUST/CHEST CIRC 34.72 2.49 0.793 = (0.740)*WAIST CIRC(IN)+(14.04) 1.52

WAIST CIRC 27.94 2.67 0.793 = (0.849)*BUST/CHEST CIRC(IN)+(-1.53) 1.63

TABLE 97

A BIVARIATE FREQUENCY TABLE FOR
CROTCH HEIGHT AND VTC
1966 ARMY MEN

	25.0	26.0	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	TOTAL
79.0													1				1
78.0														1			1
77.0								1			2	4					7
76.0				1		1				4	1	2	2				11
75.0									7	5	3	4		1			20
74.0					1					5	2	5	3	5	2		31
73.0							1	8	11	9	14	9	7	2	1		62
72.0							8	6	15	19	15	11	10	3			87
71.0				1	4	1	9	18	37	33	29	29	18	6	1		186
70.0						3	13	21	45	55	54	29	16	5	1	2	244
69.0			1		3	4	20	41	72	73	69	44	26	14		1	368
68.0			1			10	28	64	89	85	110	74	33	13	3		510
67.0			1	1	4	15	44	78	138	135	104	71	29	11		1	628
66.0					5	20	52	106	160	186	125	93	30	12	3	1	794
65.0						3	8	21	72	123	125	70	27	7	1	1	794
64.0																	777
63.0			1	3	15	23	56	124	184	166	121	49	24	9	2		681
62.0				3	6	34	62	112	153	163	90	43	13		2		580
61.0				3	6	22	58	101	158	132	61	28	7	3	1		413
60.0				2	10	16	42	83	102	81	49	22	5				227
59.0				2	4	9	39	43	49	42	24	10	4	1			134
58.0			1	2	2	7	19	39	24	23	10	5	1	1			75
57.0					4	6	11	15	13	12	9	5					34
56.0				1	3	3	9	6	4	4	3	1					8
55.0						2		1	4	1							7
54.0							1		3	1		1					2
53.0																	
TOTAL	1	5	22	77	198	545	990	1451	1391	1020	609	256	94	17	6		6682

VTC(IN)

CROTCH HEIGHT(IN)

1966 ARMY MEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
CROTCH HEIGHT	33.05	1.84	0.258	$= (0.142) \times VTC(IN) + (23.87)$	1.78
VTC	64.61	3.34	0.258	$= (0.468) \times CROTCH HEIGHT(IN) + (49.14)$	3.23

TABLE 98

A BIVARIATE FREQUENCY TABLE FOR
CROTCH HEIGHT AND VTC
1977 ARMY WOMEN

	24.0	25.0	26.0	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	TOTAL
VTC(IN)															
72.0										1					1
71.0															
70.0							1	1							2
69.0								4		1					5
68.0						3	1	4	5	2	1				16
67.0						1	2	4	4	3	1		1		16
66.0						1	6	7	10	10	3	1			38
65.0															
64.0				2	1	8	4	18	16	10	6	3			67
63.0					4	15	21	24	19	18	4	2			107
62.0				2	6	16	40	31	23	18	8	5	1	1	161
61.0			2	2	10	20	43	40	30	17	7	2			173
60.0				3	9	32	45	35	26	11	3	4	1		169
59.0			1	4	17	37	45	45	22	18	5				194
58.0			1	6	18	38	40	28	14	9	1				165
57.0			2	6	12	16	38	19	13	6					112
56.0	1		3	12	11	7	10	3	4						51
55.0			1	1	10	10	10	4	6						41
54.0				2	1	6	3	2	1						14
53.0				4	2	4		1							11
52.0					2		2	1							5
51.0						1		1							2
TOTAL	1	7	34	104	218	308	279	190	128	39	18	3	1		1330

VTC(IN)

1977 ARMY WOMEN
CROTCH HEIGHT
VTC

MEAN 30.07
60.56

ST DEV 1.72
2.84

R

0.356
0.356

REGRESSION EQUATIONS

$= (0.216) \times \text{VTC}(\text{IN}) + (16.98)$
 $= (0.587) \times \text{CROTCH HEIGHT}(\text{IN}) + (42.91)$

STD ERROR

1.61
2.65

TABLE 99

A BIVARIATE FREQUENCY TABLE FOR
CROTCH HEIGHT AND WAIST CIRC
1966 ARMY MEN

	25.0	26.0	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	TOTAL
51.0				1													1
50.0																	
49.0																	
48.0				1													2
47.0						1							1				3
46.0								1									2
45.0								1	2	1	2	2					8
44.0	1						1	3	1	5	3	1					15
43.0								4	4	4	1	1	1				20
42.0				2	1	1	4	5	7	4	3	5		2			34
41.0						3	9	6	12	10	6	4	4	1			54
40.0						3	8	6	16	14	10	6	4	2	1		71
39.0						1	5	11	17	19	11	7	2	2			92
38.0		1			4	5	16	16	32	36	26	16	8	2	1		160
37.0						6	20	19	50	36	33	8	7	5			192
36.0			1	1	8	7	16	45	73	52	49	21	13	6	1	1	294
35.0				2	1	15	39	54	77	66	69	42	18	3	1		388
34.0			1	3	6	12	34	77	108	101	71	53	23	4	2		495
33.0					8	25	49	105	147	142	110	58	22	10	2	1	679
32.0			1	4	4	27	60	137	192	180	147	98	38	14	3	2	908
31.0				3	6	12	73	163	193	234	153	90	44	13	1	1	986
30.0					2	4	24	69	132	224	188	94	38	18	4		945
29.0					1	3	6	14	62	102	155	59	22	8	1		695
28.0						1	7	20	50	70	92	32	6	4		1	446
27.0				1	3	11	13	20	37	22	21	9	4				141
26.0					8	4	5	9	6	6	3	1	1				43
25.0								2	2	3							7
24.0									2								2
23.0																	
TOTAL	1	5	22	77	198	545	980	1451	1391	1020	608	256	94	17	6		6691

(IN) CIRC WAIST

1966 ARMY MEN	R	STD ERROR
CROTCH HEIGHT	REGRESSION EQUATIONS	1.84
WAIST CIRC	$= (0.002) * \text{WAIST CIRC}(\text{IN}) + (32.98)$	3.22
	$= (0.005) * \text{CROTCH HEIGHT}(\text{IN}) + (31.45)$	

TABLE 100

A BIVARIATE FREQUENCY TABLE FOR
CROTCH HEIGHT AND WAIST CIRC
1977 ARMY WOMEN

	CROTCH HEIGHT(IN)																	TOTAL
	24.0	25.0	26.0	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	
42.0								1	1	1								3
41.0							1	1										2
40.0																		
39.0																		
38.0																		
37.0								3										3
36.0						1		4	1	1								7
35.0				1		1		3		2								9
34.0		1	1	1		2	9	4	4	2								20
33.0			1	1	6	4	2	3	2			1						20
32.0				1	5	6	8	2	6	2								30
31.0				3	3	6	17	9	7	7	2	1						55
30.0		2		5	19	28	20	15	11	3			1	1				105
29.0				3	8	17	29	26	24	19	6	3						135
28.0				2	10	27	41	38	38	22	7	4						181
27.0			1	5	23	34	51	48	19	18	10	2	2					213
26.0	1	1	4	14	33	60	44	44	33	24	3	3						220
25.0				9	22	37	32	37	27	10	4	1						179
24.0				4	10	19	26	20	14	2	2	1						98
23.0				1	6	9	8	5	2	1								32
22.0						4	3	1										8
TOTAL	1	7	34	104	218	308	279	190	128	39	18	3	1					1330

WAIST CIRC(IN)

1977 ARMY WOMEN
CROTCH HEIGHT
WAIST CIRC

MEAN
30.07
27.94

ST DEV
1.72
2.67

R

REGRESSION EQUATIONS

$WAIST\ CIRC(IN) = (0.093) * CROTCH\ HEIGHT(IN) + (27.47)$

$STD\ ERROR = 1.71$
 $STD\ ERROR = 2.64$

A BIVARIATE FREQUENCY TABLE FOR
CROTCH HEIGHT AND WAIST HT
1966 ARMY MEN

(N) 11H 1814M

1966 ARMY MEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
CROTCH HEIGHT	33.05	1.84	0.832	$= (0.724) \times \text{WAIST HT}(\text{IN}) + (2.74)$	1.02
WAIST HT	41.86	2.11	0.832	$= (0.956) \times \text{CROTCH HEIGHT}(\text{IN}) + (10.27)$	1.17

TABLE 102

A BIVARIATE FREQUENCY TABLE FOR
CROTCH HEIGHT AND WAIST HT
1977 ARMY WOMEN

	24.0	25.0	26.0	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	TOTAL
48.0												1	1		2
47.0															
46.0										1	3	5	1	1	11
45.0										10	10	6	1		27
44.0									11	27	18	4			60
43.0								8	37	43	7	1			97
42.0								53	75	29		1			166
41.0								114	52	14	1				263
40.0					3	47	123	75	13	4					265
39.0					1	12	92	76	21	2					204
38.0					6	50	56	23	7						140
37.0			1	18	30	8	8								65
36.0			2	7	7	4									20
35.0			1	3	2	2									8
34.0				1	1										2
33.0															
TOTAL	1	7	34	104	218	308	279	190	128	39	18	3	1		1330

(IN) (IN)

1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
CROTCH HEIGHT	30.07	1.72	0.882	$= (0.742) * \text{WAIST HT}(\text{IN}) + (0.45)$	0.81
WAIST HT	39.92	2.05	0.882	$= (1.048) * \text{CROTCH HEIGHT}(\text{IN}) + (8.41)$	0.97

A BIVARIATE FREQUENCY TABLE FOR
HIP CIRC AND WAIST CIRC
1966 ARMY MEN

NIP CIRC(IN)																									
30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0	TOTAL	
51.0																							1	1	
50.0																									
49.0																									
48.0																			1	1					
47.0																									
46.0												1		1				1							
45.0												1			3	3		1							
44.0												2	1	4	3	3		1		1					
43.0												2	5	6	1		1								
42.0									1			3	7	8	2		1	1							
41.0										1	3	4	7	7	1										
40.0											4	10	11	12	9	2	2								
39.0									1	1	3	11	14	12	3	1	1								
38.0					1	1	2	5	8	20	30	15	7	2	1										
37.0						2	3	9	36	41	32	26	11	1											
36.0						2	1	7	22	46	59	36	12	5	2										
35.0					2	4	23	62	85	70	24	15	8	1											
34.0				1	5	7	20	63	98	107	56	24	4	1											
33.0				1	1	4	35	122	167	116	39	8	1		1										
32.0				2	6	34	128	210	181	93	22	1		1											
31.0		1	2	2	28	136	254	288	147	43	7	1													
30.0		1	5	19	93	263	319	196	84	22	4														
29.0		1	6	65	187	335	238	85	20	7															
28.0		4	27	100	225	213	89	29	6	1	1														
27.0	2	5	57	125	132	95	21	7	2																
26.0	1	8	27	52	30	19	4																		
25.0	1	8	13	10	10	1																			
24.0		4		2	1																				
23.0		1		1																					
TOTAL	4	34	137	380	720	1113	1113	1036	785	571	339	187	122	70	40	14	7	5	1	2			1	6681	

	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
1966 ARMY MEN					
WHIP CIRC	37.09	2.46	0.856	= (0.654) * WHIP CIRC (IN) + (16.42)	1.27
WAIST CIRC	31.61	3.22	0.856	= (1.120) * WHIP CIRC (IN) + (-9.93)	1.67

TABLE 104

A BIVARIATE FREQUENCY TABLE FOR
HIP CIRC AND WAIST CIRC
1977 ARMY WOMEN

	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0	TOTAL
42.0																									3
41.0														1					1						2
40.0																									
39.0																									
38.0										1							1								3
37.0												1	1	1	3			1							7
36.0												1	1	1									1		9
35.0												1	1	1	2										20
34.0												1	1	1	1	1	1								20
33.0												1	1	1	1	1	2								30
32.0												1	1	1	1	1	1								55
31.0												1	1	1	1	1	1								105
30.0												1	1	1	1	1	1								135
29.0												1	1	1	1	1	1								191
28.0												1	1	1	1	1	1								213
27.0												1	1	1	1	1	1								220
26.0												1	1	1	1	1	1								179
25.0												1	1	1	1	1	1								98
24.0												1	1	1	1	1	1								32
23.0												1	1	1	1	1	1								8
22.0												1	1	1	1	1	1								
TOTAL	2	6	25	55	84	170	195	241	193	157	101	46	28	14	5	3	2	1	1					1	1330

WAIST CIRC(IN)

1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
HIP CIRC	37.59	2.48	0.700	$= (0.650) \times \text{WAIST CIRC(IN)} + (19.43)$	1.77
WAIST CIRC	27.94	2.67	0.700	$= (0.754) \times \text{HIP CIRC(IN)} + (-0.40)$	1.91

TABLE 105

A BIVARIATE FREQUENCY TABLE FOR
STATURE AND INTERSCYE(BACK)
1966 ARMY MEN

STATURE(IN)																						
59.0	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	TOTAL	
20.5										1		1		1							3	
20.0								1		1	2	1	2	1	1						9	
19.5										2	2	3	1	2	1						14	
19.0																			1			
18.0						1	1	2	4	6	9	4	2	2	3						34	
18.5						2	5	5	14	9	7	11	8	4	2	2					69	
18.0	1																					
17.5					3	2	8	12	25	19	24	22	15	19	10	4		2			166	
17.0				2	4	9	14	23	51	49	60	61	45	39	18	9	4	1			369	
16.5										81	77	71	76	39	22	5	7	3	2		648	
16.0										125	131	117	70	36	36	17	9		2		806	
15.5																						
15.0										176	166	126	89	74	30	19	7	2	2		1063	
14.5										164	161	124	88	48	29	15	5	1	1		1163	
14.0										151	113	87	67	46	20	6	4				876	
13.5										130	87	84	32	37	16	6	2				698	
13.0										64	63	38	26	10	9	1					432	
12.5										52	35	16	16	9	1		1	2	1		260	
12.0										8	16	16	6	2							117	
11.5										3	4	1		2	1	2					34	
11.0										1	3	1	1		1	1					15	
10.5														1							5	
TOTAL	1	9	32	58	135	235	476	761	970	1043	937	773	644	372	199	87	39	11	9	1	6682	

(INTERSCYE(BACK))(IN)

1966 ARMY MEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

STATURE 68.71 2.60 0.198 = (0.415)*INTERSCYE(BACK)(IN)+(62.32) 2.55

INTERSCYE(BACK) 15.39 1.24 0.198 = (0.095)*STATURE(IN)+(8.86) 1.22

TABLE 106

A BIVARIATE FREQUENCY TABLE FOR
STATURE AND INTERSCYE(BACK)
1977 ARMY WOMEN

	56.0	57.0	58.0	59.0	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0	72.0	73.0	TOTAL
18.0										1	1		2	2					6
17.6							1	1	1	2	4		2		1	1			13
17.0							3	1	3	1	3	7	1	5	2	2			30
16.6						2	10	12	16	18	10	12	9	5	6	3	2		103
16.0					2	11	5	35	21	34	29	14	17	13	5	4			190
15.6				1	4	8	22	35	49	45	48	27	18	8	4	1			270
16.0				3	6	11	26	39	45	32	43	20	24	8	4				264
14.6		4	1	8	12	26	25	32	29	33	36	20	14	4	4		1		245
14.0	1	1	5	6	14	19	18	18	19	17	11	10	2	3	1		1		128
13.6					3	4	9	12	6	3	6	4		1	1				50
13.0					1	4	3	3	4	4	1	1	1	1				1	24
12.6				1	1					1	1								7
12.0																			
TOTAL	1	7	18	35	80	122	189	194	194	191	193	115	90	50	27	11	6	1	1330

INTERSCYE(BACK)(IN)

STATURE(IN)

1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
STATURE	64.15	2.57	0.276	$= (0.770) * INTERSCYE(BACK)(IN) + (52.68)$	2.47
INTERSCYE(BACK)	14.90	0.92	0.276	$= (0.099) * STATURE(IN) + (8.55)$	0.88

TABLE 107

A BIVARIATE FREQUENCY TABLE FOR
STATURE AND NECK CIRC
1966 ARMY MEN

NECK CIRC(IN)	STATURE(IN)																				TOTAL
	59.0	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0	72.0	73.0	74.0	75.0	76.0	77.0	78.0	
19.6								1	1												2
19.0																					
18.5											1					1					
18.0											2	1			2	1					3
17.5							1														7
17.0						1	2	3	1	4	1			2	4		2	1		1	22
16.5		1			1	6	16	14	28	36	60	46	32	29	15	12	7	4	1		97
16.0					2	7	19	31	55	85	89	103	106	79	57	37	19	2	3	2	298
15.5																					706
15.0				1	1	7	24	29	73	136	177	192	200	148	126	84	50	18	11	2	1283
14.5				3	9	30	45	90	166	221	227	207	189	114	88	43	11	4	1	3	1457
14.0		2	7	8	30	45	90	166	221	227	207	189	114	88	43	11	4	1	3	1	1594
13.5		3	7	13	33	69	135	209	237	264	216	167	123	62	30	15	10				859
13.0		1	6	16	21	41	81	111	144	148	110	79	55	27	13	4	3				288
12.5		1	9	8	13	19	30	40	51	51	30	21	7	6	1	1					56
12.0				3	3	5	10	9	13	2	3	2	2	3		1					8
11.5					1					2	2	1									1
TOTAL	1	9	32	58	135	235	476	751	970	1043	937	773	644	371	199	87	39	11	9	1	6681

1966 ARMY MEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

STATURE 68.71 2.60 0.238 = (0.760)*NECK CIRC(IN)+(57.52) 2.53

NECK CIRC 14.72 0.81 0.238 = (0.074)*STATURE(IN)+(9.64) 0.79

A BIVARIATE FREQUENCY TABLE FOR
STATURE AND VTC
1966 ARMY MEN

STATURE(IN)																					
59.0	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	TOTAL
79.0																1					1
78.0																		1			1
77.0												1							1		7
76.0																	3				11
75.0							1			2	3	2	4	4	3	1	1	1			20
74.0										1	4	2	1	7	1	6	2	2	1		31
73.0								1		4	6	12	7	9	14	4	4	1			62
72.0										8	11	16	17	10	9	4	6		1		87
71.0										18	22	33	26	24	23	10	3	2	2		186
70.0							3	7	13	28	44	40	46	36	16	4	5	1	2	1	244
69.0							11	17	23	46	52	70	57	41	31	14	2	1	2		368
68.0							4	26	42	67	86	86	73	68	27	12	6				510
67.0							7	28	42	75	106	126	80	74	49	29	6	1	2		628
66.0	1						36	78	114	130	138	122	68	61	20	11	5				784
65.0							51	98	133	156	111	107	64	21	11	6	1				784
64.0							21	66	107	138	143	126	83	53	19	7	4				777
63.0							35	106	130	132	96	54	23	16	1	2					681
62.0							32	76	94	123	100	58	37	16	6	5	1				580
61.0							58	78	82	60	40	19	8	6							413
60.0							36	49	38	34	8	5	5	1							227
59.0							19	31	18	11	6	2	2	1							134
58.0							17	8	14	3	3										76
57.0							4	2	4	2											34
56.0							2														8
55.0							3														7
54.0							1														2
53.0	1	9	32	58	135	235	476	751	970	1043	937	773	544	372	199	87	39	11	9	1	6682

1966 ARMY MEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
STATURE	68.71	2.60	0.544	$= (0.424) * VTC(IN) + (41.31)$	2.18
VTC	64.61	3.34	0.544	$= (0.699) * STATURE(IN) + (16.58)$	2.80

TABLE 110

A BIVARIATE FREQUENCY TABLE FOR
STATURE AND VTC
1977 ARMY WOMEN

STATURE(IN)																			TOTAL
56.0	57.0	58.0	59.0	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0	72.0	73.0	TOTAL	
72.0														1				1	
71.0																			
70.0																			
69.0								1				1						2	
68.0								1				2						5	
67.0								1	2	1	5	2	2	2		1		16	
66.0								1	3	2	2	3	3		1	2		16	
65.0								1	5	7	4	6	7	7			1	38	
64.0					1	1	2	1	8	13	7	16	9	4	5			67	
63.0					1	1	8	7	17	26	16	18	10	2	1	1		107	
62.0					1	3	11	28	18	38	18	16	7	6	2	2		161	
61.0					1	5	8	15	29	33	32	21	18	4	3	2		173	
60.0					3	10	33	34	30	33	17	5	3	1				169	
59.0					3	12	22	33	40	39	20	17	4	1	1			194	
58.0					3	18	27	42	26	19	10	5	1	1				166	
57.0					2	1	7	14	23	30	15	7	2					112	
56.0	1				4	6	8	9	7	4	3							51	
55.0					2	7	12	13	3	2	2							41	
54.0					1	2	5	1	2	1								14	
53.0					2	3	1	4	1									11	
52.0					1	1	1	1	1									5	
51.0					1													2	
TOTAL	1	7	18	35	80	122	189	194	191	193	116	90	50	27	11	6	1	1330	

VTC(IN)

1977 ARMY WOMEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

STATURE 64.15 2.57 0.658 = (0.594)*VTC(IN)+(28.18) 1.93

VTC 60.56 2.84 0.658 = (0.728)*STATURE(IN)+(13.85) 2.14

TABLE 111

A BIVARIATE FREQUENCY TABLE FOR
STATURE AND WAIST BACK
1966 ARMY MEN

	59.0	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	TOTAL
23.0										1		1		1	1			2	1			1
22.5							2			2		1		2	2		1			1		10
22.0								1		2		1	1	6	5	3	3	1	2			11
21.5									1	2	2	3	3	15	10	8	8	2		1		32
21.0							1		1	5	7	15	23	28	27	23	4	4	2	1		96
20.5									8	14	9	26	34	41	47	23	12	7	2			182
20.0									7	21	44	46	49	41	47	23	7	5	2	2		307
19.5						1		5	7	21	63	80	97	77	72	55	24	7	5	2	1	546
19.0						2	7	25	29	63	80	97	77	72	55	24	7	5	2	1		838
18.5						1	7	13	28	70	114	137	138	111	90	77	29	17	5	1		751
18.0						1	6	12	52	75	113	127	112	110	69	40	23	7	3			874
17.5						1	8	22	46	125	130	140	138	96	71	40	26	13	5	1	1	944
17.0						6	9	21	71	106	167	185	129	104	72	38	19	8	3			804
16.5	1					1	10	25	41	71	126	137	111	81	43	20	12	2	1			634
16.0						10	7	22	40	64	98	121	109	68	52	21	11	6	3	1		373
15.5						2	10	16	28	68	57	58	37	27	11	2						181
15.0						4	7	15	28	36	27	24	12	5	2		1					62
14.5						2	3	2	7	13	9	11	6	7	2							32
14.0						3	2	4	4	9	1	4	2	1								4
13.5						1	1															
TOTAL	1	9	32	58	135	235	476	751	970	1043	937	773	544	372	199	87	39	11	9	1		6682

(IN) WAIST BACK

1966 ARMY MEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

STATURE 68.71 2.60 0.427 = (0.821)*WAIST BACK (IN)+(54.15) 2.35

WAIST BACK 17.73 1.35 0.427 = (0.222)*STATURE(IN)+(2.48) 1.22

TABLE 112

A BIVARIATE FREQUENCY TABLE FOR
STATURE AND WAIST BACK
1977 ARMY WOMEN

STATURE(IN)																				TOTAL
56.0	57.0	58.0	59.0	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0	72.0	73.0			
20.6												1							1	
20.0										1		2							3	
19.6												2	1						4	
19.0									1	1	2	2	1	2	1	1			14	
18.6							1	2	3	4	5	3	7	6	1				31	
18.0							2	3	4	2	10	12	9	8	2	2	1		71	
17.6			1			2	4	2	12	22	18	14	20	7	6	4			108	
17.0						4	1	12	22	31	48	19	16	6	3	3			213	
16.6					1	6	7	21	34	47	33	48	26	9	6				246	
16.0			2	2	12	21	35	47	33	48	26	19	14	2					239	
15.6		1		5	12	26	49	39	40	32	19	14	2	2	1				201	
15.0		1	3	11	21	27	32	35	29	21	15	3	2	2					127	
14.6		4	7	7	16	24	34	15	9	3	3	3		1					66	
14.0			2	6	11	9	6	5	8	5	2								15	
13.6	1	1	4	1	2	1	3		1										3	
13.0						1	1													
TOTAL	1	7	18	35	80	122	189	194	191	193	115	90	50	27	11	6	1		1330	

(IN)
WAIST BACK

1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
STATURE	64.15	2.57	0.520	= (1.280)*WAIST BACK (IN)+(43.57)	2.19
WAIST BACK	16.08	1.04	0.520	= (0.211)*STATURE(IN)+(2.55)	0.89

A BIVARIATE FREQUENCY TABLE FOR
STATURE AND WAIST CIRC
1966 ARMY MEN

STATURE(IN)																					
59.0	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	TOTAL
51.0										1											1
50.0																					
49.0																					
48.0							1			1											2
47.0							1														3
46.0																1					3
45.0										1											2
44.0	1										1	3									8
43.0						1		1	2	1			3	5	1						15
42.0						1	2	2	3	6	2			2			2				20
41.0					2	1	2	6	6	2	1	6	3	3	2	2	1				34
40.0						6	6	2	7	9	8	4	4	4	4	4	1				64
39.0						1	5	5	2	9	10	12	11	6	8	1					71
38.0							3	6	9	20	14	12	11	8	4	2			1		92
37.0	1					4	10	10	12	22	35	18	11	17	9	3	4	1			160
36.0						2	6	16	16	33	31	28	19	16	3	5	2				192
36.0				2	6	5	17	21	41	42	36	48	31	17	17	5	2	4			294
35.0							12	8	18	40	49	46	36	27	32	16	8	4		1	386
34.0				2	3	5	19	53	71	61	63	78	52	35	23	9	1	1	1		495
33.0						1	4	11	13	46	63	86	105	107	96	67	42	17	10	3	679
32.0							7	16	26	54	84	156	137	139	99	87	58	23	11	1	908
31.0							3	6	10	32	57	121	148	191	135	112	81	50	23	1	986
30.0							3	7	22	36	87	114	137	165	136	98	63	44	30	1	946
29.0							5	7	15	37	68	98	122	115	86	68	37	20	12	3	695
28.0							2	4	16	20	28	47	79	69	71	43	28	6	6	3	446
27.0							1	4	5	8	10	16	23	30	11	12	7	8	4	1	141
26.0							2	5	2	10	6	7	6	3	1						43
25.0										1	1										7
24.0																					
23.0										2											2
TOTAL	1	9	32	58	135	235	476	751	970	1043	937	773	544	372	198	87	39	11	9	1	6681

1966 ARMY MEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
STATURE	68.71	2.60	0.228	= (0.184)*WAIST CIRC(IN)+(62.89)	2.53
WAIST CIRC	31.61	3.22	0.228	= (0.282)*STATURE(IN)+(12.24)	3.14

TABLE 114

A BIVARIATE FREQUENCY TABLE FOR
STATURE AND WAIST CIRC
1977 ARMY WOMEN

	55.0	57.0	58.0	59.0	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0	72.0	73.0	TOTAL
STATURE(IN)																			
42.0											1	1							3
41.0									2										2
40.0																			
39.0																			
38.0																			
37.0										1	2	1	2	1					3
36.0									2	1	1	1	1		1	2			7
35.0									4	5	3	4	3	2					8
34.0									3	2	2	4	7	1					20
33.0									2	3	3	3	3	2					20
32.0									1	3	8	7	10	5	4	2			30
31.0									2	16	16	6	8	5	2	2	1		55
30.0									1	15	21	11	16	6	7	2	1		105
29.0									4	25	21	11	16	6	7	2	1		135
28.0									5	24	31	34	20	15	9	4	1		191
27.0									6	17	29	37	30	18	9	1	4	2	213
26.0									3	12	32	38	32	28	16	5	6	1	220
25.0									5	9	26	32	28	16	5	6	2		179
24.0									7	7	22	19	14	8	4	2	1		98
23.0									2	1	4	6	12	6	1	2			32
22.0									1	1	1	2							8
TOTAL	1	7	18	35	60	122	189	194	191	193	115	90	50	27	11	6	1		1330

WAIST CIRC(IN)

1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
STATURE	64.15	2.57	0.208	$= (0.200) * \text{WAIST CIRC(IN)} + (58.57)$	2.51
WAIST CIRC	27.94	2.67	0.208	$= (0.216) * \text{STATURE(IN)} + (14.09)$	2.61

A BIVARIATE FREQUENCY TABLE FOR
STATURE AND WAIST HT
1966 ARMY MEN

	59.0	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	TOTAL
50.0																	1		1	2		4
49.0																1		4	3	2		11
48.0																13	15	8	5	3		50
47.0														6	19	39	23	12				104
46.0											1	37	48	83	55	25	10	2	1	1		272
45.0										1	2	7	154	168	131	54	15	4				595
44.0										6	14	48	249	183	80	27	5	1				901
43.0										31	99	217	340	212	100	42	2					1263
42.0										161	328	340	212	100	42	8	2					1200
41.0										331	332	197	85	27	7	2						1094
40.0					2	10	46	143	246	300	202	102	30	9	4							625
39.0						23	77	150	190	100	55	22	4									329
38.0		1	5	11	49	57	83	72	37	10	3	1										147
37.0		3	10	20	29	37	36	8	3	1												58
36.0		1	3	8	13	16	9	7	1													24
35.0																						6
34.0		2																				
TOTAL	1	9	32	58	135	235	476	751	970	1043	937	773	544	372	199	87	39	11	9	1		6682

1966 ARMY MEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
STATURE	68.71	2.60	0.841	= (1.035)*WAIST HT(IN)+(25.38)	1.41
WAIST HT	41.86	2.11	0.841	= (0.683)*STATURE(IN)+(-5.07)	1.14

TABLE 116

A BIVARIATE FREQUENCY TABLE FOR
STATURE AND WAIST HT
1977 ARMY WOMEN

	56.0	57.0	58.0	59.0	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0	72.0	73.0	TOTAL
48.0																	1	1	2
47.0																			
46.0														2	2	3	4		11
45.0													3	5	13	5	1		27
44.0														17	10	2			60
43.0											1	9	30	21	1				97
42.0										5	16	30	31	14	1				166
41.0									6	21	59	47	26	5	1	1			263
40.0									42	81	85	24	10	3					265
39.0						2	17	63	84	61	30	5	3						204
38.0						8	51	75	49	17	2								140
37.0					1	9	43	41	29	12	5								65
36.0					7	20	23	6	7	1	1								20
35.0				3	6	4	3	4											8
34.0	1	3	2	1	1														2
33.0		1	1																
TOTAL	1	7	18	36	60	122	189	194	191	193	115	90	50	27	11	6	1		1330

(N) 116 18199

1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
STATURE	64.15	2.57	0.897	$= (1.123) * \text{WAIST HT}(\text{IN}) + (19.33)$	1.14
WAIST HT	39.92	2.05	0.897	$= (0.715) * \text{STATURE}(\text{IN}) + (-5.95)$	0.91

TABLE 117

A BIVARIATE FREQUENCY TABLE FOR
UPPER THIGH CIRC AND WAIST CIRC
1966 ARMY MEN

	15.0	16.0	17.0	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0	27.0	28.0	29.0	30.0	31.0	TOTAL
51.0															1			1
50.0																		
49.0																		
48.0																		
47.0												1	1			1		2
46.0										1								3
45.0												1	1					2
44.0												3	4	1				8
43.0									1	2	1		1	5	1	3		15
42.0									3	3	3	4	2	4				20
41.0								1	1			7	14	7	1	3	1	34
40.0									2	5	10	13	12	2	2			54
39.0						1	2	6	6	18	22	10	5	1				71
38.0						1	1	11	22	19	22	14	1	1				92
37.0							3	8	16	30	46	33	21	3				160
36.0					2	1	7	26	51	62	32	11						192
35.0					1	2	9	13	61	91	82	24	10		1			294
34.0					1	4	17	48	86	117	79	29	2	2				360
33.0					2	2	21	81	177	131	63	14	3	1				495
32.0			4	3	13	52	171	220	154	46	15	1						679
31.0			2	6	32	156	273	289	116	33	2							908
30.0			6	13	78	271	336	213	53	15	1							986
29.0			3	40	168	340	263	105	23	2	1							945
28.0		1	7	67	215	241	122	33	8	1								695
27.0	1	4	20	91	159	112	46	10	3									446
26.0		1	8	45	56	26	3	2										141
25.0		4	7	14	13	3	2											43
24.0		1	2		4													7
23.0			1															2
TOTAL	1	12	59	283	746	1254	1378	1262	816	495	232	100	26	10	4	1		6681

(CIRC IN)

1966 ARMY MEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

UPPER THIGH CIRC 21.82 1.89 0.769 = (0.451)*WAIST CIRC(IN)+(7.56) 1.21

WAIST CIRC 31.61 3.22 0.769 = (1.310)*UPPER THIGH CIRC(IN)+(3.03) 2.06

TABLE 118

A BIVARIATE FREQUENCY TABLE FOR
UPPER THIGH CIRC AND WAIST CIRC
1977 ARMY WOMEN

	16.0	17.0	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0	27.0	28.0	29.0	TOTAL
42.0											1		1	1	3
41.0												2			2
40.0															
39.0															
38.0															
37.0							1					1	1		3
36.0									1	1	2		3		7
35.0								1	1	4				3	9
34.0							1	1	2	4	4	5			20
33.0							1	1	4	7	3	4			20
32.0							3	3	11	6	3	4			30
31.0						1	6	10	20	8	8	2			55
30.0						1	7	20	36	27	10	2	2		105
29.0						2	14	43	41	23	9	3			135
28.0					1	5	37	76	48	17	6	1			191
27.0				1	7	21	46	62	47	24	3	2			213
26.0				5	12	41	52	62	35	13					220
25.0				1	4	28	56	58	24	6	2				179
24.0			3	10	24	28	24	8	1						98
23.0			3	6	12	7	3	1							32
22.0	1		1	4	1	1									8
TOTAL	1	7	27	88	163	253	313	253	136	49	26	10	4		1330

WAIST CIRC(IN)

UPPER THIGH CIRC(IN)

1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
UPPER THIGH CIRC	22.40	1.79	0.692	= (0.464)*WAIST CIRC(IN)+(9.44)	1.29
WAIST CIRC	27.94	2.67	0.692	= (1.031)*UPPER THIGH CIRC(IN)+(4.85)	1.93

TABLE 119

A BIVARIATE FREQUENCY TABLE FOR
VTC AND WAIST CIRC
1966 ARMY MEN

VTC(IN)																											
53.0	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	TOTAL
51.0																							1				1
50.0																											
49.0																											
48.0																											
47.0																											
46.0																											
45.0																											
44.0																											
43.0																											
42.0																											
41.0																											
40.0																											
39.0																											
38.0																											
37.0																											
36.0																											
35.0																											
34.0																											
33.0																											
32.0																											
31.0																											
30.0																											
29.0																											
28.0																											
27.0																											
26.0																											
25.0																											
24.0																											
23.0																											
TOTAL	2	7	9	34	75	134	227	413	590	691	777	734	734	629	510	369	244	186	97	61	31	20	11	7	1	1	6981

1966 ARMY MEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR
 VTC 64.61 3.34 0.647 = (0.672)*WAIST CIRC(IN)+(43.36) 2.55
 WAIST CIRC 31.61 3.22 0.647 = (0.623)*VTC(IN)+(-8.64) 2.46

TABLE 120

A BIVARIATE FREQUENCY TABLE FOR
VTC AND WAIST CIRC
1977 ARMY WOMEN

	51.0	52.0	53.0	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0	72.0	TOTAL
42.0																		2	1				3
41.0																1				1			2
40.0																							
39.0																							
38.0																							
37.0												1						1					3
36.0												1						2	2	1			7
35.0											1	4				3	1	1					9
34.0										1	1	2	2	2	4	1	3	2	1		1		20
33.0									1	1	1	2	4	4	3	1	4						20
32.0									1	2	5	9	3	2	3	2	1	1					30
31.0							1	1	1	6	6	10	5	9	7	4	1		2				55
30.0						2	2	5	7	14	6	16	21	15	10	6	1						105
29.0					1	1	6	6	8	20	14	15	30	17	14	5	3	1					135
28.0						2	6	12	18	25	24	33	25	29	8	7	1	1					191
27.0					2	4	4	14	24	41	45	24	24	17	9	3	2						213
26.0			1	2	3	9	7	29	34	34	30	34	21	8	4	4							220
25.0			2	2	4	12	13	23	35	32	23	15	12	4	1		1						179
24.0		1	2	4	1	7	13	17	18	11	10	8	4			1	1						98
23.0		1		3	2	4	3	3	7	6	2	1											32
22.0				1	1		2	2	2		1												8
TOTAL	2	5	11	14	41	51	112	155	194	194	169	173	151	107	67	38	16	16	5	2		1	1330

WAIST CIRC(IN)

1977 ARMY WOMEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

VTC 60.56 2.84 0.558 = (0.594) + WAIST CIRC(IN) + (43.96) 2.36

WAIST CIRC 27.94 2.67 0.558 = (0.525) + VTC(IN) + (-3.85) 2.22

TABLE 121

A BIVARIATE FREQUENCY TABLE FOR
 WAIST CIRC AND WEIGHT
 1966 ARMY MEN

WAIST CIRC(IN)																															
23.0	24.0	25.0	26.0	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	48.0	49.0	50.0	51.0	TOTAL		
260.0																													1	1	
275.0																														3	
270.0																														1	
265.0																														1	
260.0																														4	
255.0																														1	
250.0																														7	
245.0																														9	
240.0																														11	
235.0																														19	
230.0																														13	
225.0																														20	
220.0																														43	
215.0																														57	
210.0																														71	
206.0																														98	
200.0																														121	
195.0																														161	
190.0																														200	
185.0																														245	
180.0																														313	
175.0																														376	
170.0																														434	
165.0																														562	
160.0																														584	
155.0																														680	
150.0																														630	
145.0																														531	
140.0																														519	
135.0																														363	
130.0																														267	
125.0																														185	
120.0																														95	
115.0																														26	
110.0																														22	
105.0																														10	
100.0																														3	
95.0																															
TOTAL	2	7	43	141	444	695	945	986	908	679	495	386	293	192	160	92	71	54	34	20	15	8	2	3	2			1	6876		

1966 ARMY MEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR
 WAIST CIRC 31.61 3.22 0.856 = (0.118)*WEIGHT(LB)+(12.84) 1.67
 WEIGHT 159.09 23.34 0.856 = (6.202)*WAIST CIRC(IN)+(-36.98) 12.08

TABLE 122

A BIVARIATE FREQUENCY TABLE FOR
 WAIST CIRC AND WEIGHT
 1977 ARMY WOMEN

	22.0	23.0	24.0	25.0	26.0	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	TOTAL
WEIGHT(LB)	WAIST CIRC(IN)																					
220.0															1							1
215.0																				1		1
210.0																			1			1
205.0																				2		2
200.0																	1					1
195.0														1	1	2				1		5
190.0																						
185.0													2	3	1	1	1					8
180.0											1	4	1	2	1	2						10
175.0									3	1	1	1	1	3								9
170.0							1		3	3	5	1	2			1						16
165.0							2	9	5	5	6	1	4	3								30
160.0						1	4	7	12	10	8	4	5	3	3	1						58
155.0						1	7	11	14	13	5	5	3	1	2							62
150.0						1	10	23	24	19	6	4	1	2			1					97
145.0					1	1	16	24	20	19	9	5		1								114
140.0					7	16	35	35	16	13	5	6	2	1								136
135.0				3	11	31	30	37	14	10	6											142
130.0				5	12	40	33	28	12	7	1											138
125.0				15	29	48	37	18	7	2	1											157
120.0				4	10	29	24	17	5	4	1											94
115.0				1	4	14	15	7	3	2												95
110.0	1	4	16	24	12	4	2															63
105.0	1	4	6	20	8	6	3															45
100.0	3	7	8	8	3	1																30
95.0	5	5	5																			11
90.0	1	2	1																			4
85.0																						
TOTAL	8	32	98	179	220	213	191	135	105	55	30	20	20	9	7	3			2	3		1330

1977 ARMY WOMEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

WAIST CIRC 27.94 2.67 0.787 = (0.112)*WEIGHT(LB)+(13.15) 1.65

WEIGHT 132.11 18.76 0.787 = (5.531)*WAIST CIRC(IN)+(-22.45) 11.56

SECTION III

Unique Male and Female Bivariates

TABLE 123

A BIVARIATE FREQUENCY TABLE FOR
ANKLE HT AND FOOT LENGTH
1977 ARMY WOMEN

FOOT LENGTH (IN)	ANKLE HT (IN)																TOTAL
	3.00	3.25	3.50	3.75	4.00	4.25	4.50	4.75	5.00	5.25	5.50	5.75	6.00	6.25	6.50	6.75	
11.75																	1
11.50																	
11.25																	3
11.00							1	1	2	3		2					12
10.75				1				6	6	3		3					31
10.50					4	11	10	20	11	11	1					1	69
10.25		1	4	13	19	48	48	40	17	9	1	3					155
10.00			5	27	33	60	60	44	19	4	1						193
9.75			3	13	41	67	63	38	17	6	1	1					240
9.50			7	22	46	77	91	36	12	4							293
9.25	1	5	32	35	43	45	45	17	3	2							183
9.00		4	12	28	22	24	6										96
8.75		2	7	14	9	6	6	6	1								43
8.50		1	2	6	1	1	1										11
8.25							1										1
8.00																	
TOTAL	1	23	98	214	284	360	216	87	43	4	10	1					1390

1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
ANKLE HT	4.27	0.40	0.449	$= (0.365) * \text{FOOT LENGTH (IN)} + (0.78)$	0.36
FOOT LENGTH	9.57	0.49	0.449	$= (0.552) * \text{ANKLE HT (IN)} + (7.21)$	0.44

TABLE 124

A BIVARIATE FREQUENCY TABLE FOR
ANKLE HT AND SPHYRION HT
1977 ARMY WOMEN

ANKLE HT(IN)															
	3.00	3.25	3.50	3.75	4.00	4.25	4.50	4.75	5.00	5.25	5.50	5.75	6.00	TOTAL	
SPHYRION HT(IN)	3.50						1	1						2	
	3.25					1	6	6			1	1		17	
	3.00					40	74	62	25	11		2		237	
	2.75			7	26	118	139	89	28	19	2	6	1	616	
	2.50		6	33	75	96	108	60	27	10	1	2		437	
	2.25	1	11	45	86	28	21	16	6	3				116	
	2.00		6	12	25	2	1	1						6	
	1.75			1											
TOTAL	1	23	98	214	284	350	215	87	43	4	10	1		1330	

1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
ANKLE HT	4.27	0.40	0.225	= (0.422)*SPHYRION HT(IN)+(3.20)	0.39
SPHYRION HT	2.54	0.21	0.225	= (0.120)*ANKLE HT(IN)+(2.03)	0.21

TABLE 125

A BIVARIATE FREQUENCY TABLE FOR
BUST/CHEST CIRC AND SLEEVE LENGTH
1966 ARMY MEN

BUST/CHEST CIRC(IN)																								
28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	48.0	49.0	TOTAL		
39.5										1				1	1	1	1					6		
39.0				1					1	2	3			2	3	1						13		
38.5									1	2	4		2		1	1						13		
38.0																								
37.5							1	1	3	3	3	2	4	9	5	1	2	2				36		
37.0							1	7	5	13	23	11	17	6	6	2	2	1		2	1	97		
36.5						2	4	10	17	14	13	14	22	12	8	8		4	2	2		134		
36.0						4	9	13	23	32	17	35	24	17	16	7	3	1	3	3		207		
35.5																								
35.0				1	4	7	21	41	53	69	56	47	40	23	13	9	5	2	1			392		
35.0				1	4	18	45	66	91	106	66	70	42	17	14	11	8	5	3	3		570		
34.5				2	9	18	55	88	113	95	95	57	36	21	16	7	3	2	1	2	1	621		
34.0				6	21	39	98	133	142	116	106	77	42	27	18	7	4					837		
34.0				4	24	44	105	189	184	139	111	71	38	16	13	8	2	3	1			963		
33.5				1	4	26	80	102	135	140	130	74	37	31	16	8	3	2				790		
33.0				2	7	25	75	103	148	112	76	54	38	13	10	6	3	1				672		
32.5				8	27	61	98	143	78	58	46	30	16	6	2	1						573		
32.0				2	11	20	41	63	51	41	31	21	12	2								298		
31.5				3	5	28	36	41	44	27	19	15	5	6	1			1				230		
31.0				1	4	14	30	27	16	6	6	1	1	1								135		
30.5				1	5	5	16	11	8													55		
30.0				2	3	6	5	4	3	2	2	3	2									25		
29.5				1	1	1	1	4				1										10		
29.0				2	1	1	1	2	1													3		
28.5																						10		
28.0																						3		
27.5																						2		
TOTAL	1	1	15	63	217	478	795	1111	1052	911	712	518	339	186	130	70	33	22	11	13	4		6682	

SLEEVE LENGTH(IN)

1966 ARMY MEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

BUST/CHEST CIRC 36.92 2.63 0.429 = (0.725)*SLEEVE LENGTH(IN)+(12.41) 2.38

SLEEVE LENGTH 33.80 1.56 0.429 = (0.254)*BUST/CHEST CIRC(IN)+(24.42) 1.41

TABLE 126

A BIVARIATE FREQUENCY TABLE FOR
BUST/CHEST CIRC AND SLEEVE OUTSEAM
1977 ARMY WOMEN

	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	TOTAL
25.5							1	1														2
25.0							1						1									1
24.5										1	2	2					1					7
24.0										6	2	4	3	1								28
23.5				1	4	3			3	6	2	4	2	2	1	1						60
23.0				1	2	3	8	11	11	6	10	2	3	2	2						1	97
22.5				1	4	5	11	12	12	22	15	13	8	3	2							146
22.0					10	19	18	22	22	33	18	7	10	5	1	1	2					168
21.5					7	9	11	22	35	28	16	10	13	4		1	1		1			234
21.0	1	1	2	8	21	27	39	32	32	31	36	13	7	6	6	3		1				204
20.5			2	12	17	30	32	26	26	35	19	20	5	3		2						206
20.0		2	1	16	21	30	38	24	33	19	11	7	4	3	1	2						112
19.5			2	9	11	28	15	20	9	7	4	4	2	2		1						53
19.0			1	2	2	14	6	6	6	9	6	2	2	3								20
18.5				1	3	4	2	2	2	1	4	3										9
18.0						1	3			2	1	2										2
17.5										1			1									1
17.0																						
TOTAL	1	3	9	56	106	179	192	193	217	154	93	65	32	11	11	5		2	1	1		1330

SLEEVE OUTSEAM (IN)

BUST/CHEST CIRC (IN)

1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
BUST/CHEST CIRC	34.72	2.49	0.200	= (0.427)*SLEEVE OUTSEAM(IN)+(25.67)	2.44
SLEEVE OUTSEAM	21.18	1.17	0.200	= (0.093)*BUST/CHEST CIRC(IN)+(17.95)	1.14

TABLE 127

A BIVARIATE FREQUENCY TABLE FOR
BUST/CHEST CIRC AND WAIST FRONT
1977 ARMY WOMEN

	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	TOTAL
19.0										1	1		1	1								1
18.5										1	1											4
18.0									1	1	1	1				1			1			7
17.5						1				1	1	2	1	3								11
17.0						1	1	1	2	4	3	1	4	1	1	2	2		1			24
16.5					1	1	4	3	5	7	14	5	3	5	3	3						54
16.0						3	8	6	12	14	12	13	6	4	3	3						84
15.5					4	11	23	18	18	35	38	14	19	9	2		1					194
15.0					8	9	19	31	43	43	23	23	11	4	3	1						218
14.5					14	29	47	57	42	38	29	12	7	2	1	1						281
14.0					2	12	18	35	33	34	32	27	14	7	1							216
13.5					4	9	22	27	28	23	19	11	6	3	4	1						169
13.0					1	8	7	8	11	8	11	4	3	1								62
12.5								4	1	3	2											12
12.0																						3
11.5																						
TOTAL	1	3	9	56	105	179	192	193	217	154	93	65	32	11	11	5		2	1	1		1330

BUST/CHEST CIRC(IN)

WAIST FRONT(IN)

1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
BUST/CHEST CIRC	34.72	2.49	0.343	$= (0.829) \times \text{WAIST FRONT}(\text{IN}) + (22.73)$	2.34
WAIST FRONT	14.46	1.03	0.343	$= (0.142) \times \text{BUST/CHEST CIRC}(\text{IN}) + (9.53)$	0.97

TABLE 128

A BIVARIATE FREQUENCY TABLE FOR
CROTCH LENGTH AND WAIST CIRC
1977 ARMY WOMEN

CROTCH LENGTH(IN)																						
20.0	21.0	22.0	23.0	24.0	25.0	26.0	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	TOTAL	
42.0												2		1							3	
41.0									1					1							2	
40.0																						
39.0																						
38.0																						
37.0			1							1				1							3	
36.0								1		2	2		1		1						7	
35.0						2		1	2	1			2						1		9	
34.0		1					1	2	2	3	7	2	2	1							20	
33.0			1		1		2	2	6	2	2	3		3							20	
32.0			2		3	3	1	6	1	7	4	2	2	1							30	
31.0						4	4	8	10	5	14	5	2	1	2						55	
30.0			3	1	3	4	6	12	17	18	24	14	3								105	
29.0		1			3	3	10	16	27	23	26	16	6	3	2						135	
28.0			2	2		4	23	23	33	37	45	9	10	3							191	
27.0	2			2	5	8	17	28	36	54	39	14	7	1							213	
26.0	2	2	1	1	4	2	29	48	33	43	31	18	4	1	1						220	
25.0					5	8	27	42	46	31	12	5	3								179	
24.0			1	2	6	11	16	23	18	13	3	4	1								98	
23.0			1		3	6	4	9	7	1	1										32	
22.0						2	2	1	1	2											8	
TOTAL	4	4	11	9	33	57	139	216	241	240	213	96	43	17	6				1		1330	

TOTAL

1977 ARMY WOMEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

CROTCH LENGTH 28.71 2.15 0.262 = (0.210)*WAIST CIRC(IN)+(22.84) 2.07

WAIST CIRC 27.94 2.67 0.262 = (0.326)*CROTCH LENGTH(IN)+(18.59) 2.58

TABLE 129

A BIVARIATE FREQUENCY TABLE FOR
NECK CIRC AND SLEEVE LENGTH
1966 ARMY MEN

	11.5	12.0	12.5	13.0	13.5	14.0	14.5	15.0	15.5	16.0	16.5	17.0	17.5	18.0	18.5	19.0	19.5	TOTAL
39.5									1	2	2		1					6
39.0							1	1	2	1	2	4			1			12
38.5							1	1	3	3	4	1						13
38.0									6	12	6	1	1					36
37.5					1	3	9	19	27	23	11	4	1					97
37.0					3	9	20	19	38	28	14	10		1	1			134
36.5				1	2	26	40	41	38	37	9	1	2					207
36.0				1	13	20	70	110	78	33	6	1				1		392
35.5				3	20	45	105	151	123	70	41	13	8					670
35.0				1	11	67	144	137	138	80	33	14	6	1				621
34.5				3	28	81	196	201	180	101	32	13	1	1				837
34.0				2	8	30	108	254	190	89	27	11	1			1		953
33.5				3	5	38	118	194	140	69	17	6	2		1			790
33.0				5	41	116	187	131	120	60	19	3						672
32.5				8	40	112	160	118	86	32	14	1		1				573
32.0				7	22	64	86	63	38	15	3							298
31.5	1			6	30	54	66	41	20	8	3	1						230
31.0				3	14	33	43	21	15	4								135
30.5				3	8	15	17	8	2	2								55
30.0				1	1	6	9	5	1	2	1							25
29.5				1			4	4	1									10
29.0				2	3	1	3		1									10
28.5					1	2												3
28.0																		2
27.5																		
TOTAL	1	8	56	288	859	1594	1457	1283	706	298	97	22	7	3		2		6681

1966 ARMY MEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR
 NECK CIRC 14.72 0.81 0.372 = (0.195)*SLEEVE LENGTH(IN)+(8.13) 0.76
 SLEEVE LENGTH 33.79 1.56 0.372 = (0.711)*NECK CIRC(IN)+(23.33) 1.44

TABLE 130

A BIVARIATE FREQUENCY TABLE FOR
SPHYRION HT AND FOOT LENGTH
1977 ARMY WOMEN

SPHYRION HT(IN)												TOTAL
1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50					
11.75				1						1		
11.50												
11.25												
11.00					1	2				3		
10.75		1	4		3	3		1		12		
10.50		1	7		15	8				31		
10.25		8	16		23	19	2	1		69		
10.00	1	13	43		56	38	4			166		
9.75		9	57		83	41	3			193		
9.50	2	15	73		100	48	2			240		
9.25		29	93		123	44	4			293		
9.00	2	15	75		74	17				183		
8.75	1	15	40		25	13	1			96		
8.50		6	24		8	4	1			43		
8.25		4	4		3					11		
8.00			1							1		
TOTAL	6	116	437	515	237	17	2			1330		

1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
SPHYRION HT	2.54	0.21	0.213	$= (0.092)*\text{FOOT LENGTH(IN)} + (1.66)$	0.21
FOOT LENGTH	9.57	0.49	0.213	$= (0.490)*\text{SPHYRION HT(IN)} + (8.33)$	0.48

TABLE 131

A BIVARIATE FREQUENCY TABLE FOR
STATURE AND SLEEVE LENGTH
1966 ARMY MEN

	59.0	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	TOTAL
39.5																1	2	1	1	1		6
39.0															3	5	3	1	1			13
38.5											1			1	2	2	4	1	1	1		13
38.0															7	3	7	4	2			36
37.5										1	1	5	9	20	14	20	14	9	3	1	1	97
37.0										1	4	8	22	23	28	23	11	9	2			134
36.5										2	14	28	36	40	37	30	11	5				207
36.0										6	17	28	62	66	77	69	34	10	4			392
35.5																						570
35.0																						621
34.5																						837
34.0																						963
33.5																						790
33.0																						672
32.5																						673
32.0																						238
31.5																						230
31.0																						135
30.5																						55
30.0																						26
29.5																						10
29.0																						10
28.5																						3
28.0																						2
27.5																						6682
TOTAL	1	9	32	58	135	235	476	751	970	1043	937	773	544	372	199	87	39	11	9	1		

SLEEVE LENGTH(IN)

STATURE(IN)

1966 ARMY MEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

STATURE 68.71 2.60 0.701 = (1.170)*SLEEVE LENGTH(IN)+(29.17) 1.86

SLEEVE LENGTH 33.80 1.56 0.701 = (0.419)*STATURE(IN)+(5.01) 1.11

TABLE 132

A BIVARIATE FREQUENCY TABLE FOR
STATURE AND SLEEVE OUTSEAM
1977 ARMY WOMEN

	56.0	57.0	58.0	59.0	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0	72.0	73.0	TOTAL
25.6															1			1	2
25.0														1					1
24.5													1		2	1	2		7
24.0												4	7	6	5	1	2		28
23.5										1	2	4	6	10	5	6			50
23.0									1	5	4								87
22.5								2	1	7	13	25	19	18	10	1	1		146
22.0							1	4	13	16	45	20	30	11	3	2	1		158
21.6							5	14	24	37	40	24	10	3		1			234
21.0						4	12	33	52	45	62	27	8		1				204
20.5						10	21	49	46	44	27	4	1						206
20.0					3	11	22	43	49	34	29	10	6						112
19.5					3	1	9	26	27	24	16	7							53
19.0					3	9	13	9	12	7									20
18.5					8	6	3	2	1	1									9
18.0	1	1	1	1	1	2	2	1											2
17.5																			1
17.0																			1
TOTAL	1	7	18	36	80	122	189	194	191	193	116	90	60	27	11	6	1		1330

SLEEVE OUTSEAM(IN)

STATURE(IN)

1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
STATURE	64.15	2.57	0.782	$= (1.720) * \text{SLEEVE OUTSEAM(IN)} + (27.73)$	1.60
SLEEVE OUTSEAM	21.18	1.17	0.782	$= (0.355) * \text{STATURE(IN)} + (-1.60)$	0.73

TABLE 133

A BIVARIATE FREQUENCY TABLE FOR
STATURE AND WAIST FRONT
1977 ARMY WOMEN

		STATURE(IN)																		TOTAL	
		56.0	57.0	58.0	59.0	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0	72.0	73.0	TOTAL	
19.0	1										1									1	
18.5										1	1			1			1			4	
18.0										1			1	2	3					7	
17.5												2		2	1					11	
17.0						1			1	3	1	2		4	5	1				24	
16.5								1	5	2	2		4	4	5					54	
16.0				1	1			4	3	6	9	11	4	8	5	1	1			84	
15.5				1	1			1	12	11	12	12	11	13	3	3	2	1		194	
15.0				2	2	7		6	21	28	33	39	17	13	14	7	3	2		218	
14.5				1	1			5	9	23	33	40	25	22	10	6	3	2	1	281	
14.0				2	4	20		33	40	43	42	45	26	14	5	7				216	
13.5				3	6	7	20	24	37	32	35	25	14	7	3	1	1			159	
13.0	1			3	13	20	28	29	26	13	9	9	13	2	1					62	
12.5				2	1	7	12	14	6	2	2			2						12	
12.0							4	3	2	2										3	
11.5									1		2										
TOTAL	1	7	18	35	80	122	189	194	191	193	116	90	60	27	11	6	1			1330	

WAIST FRONT(IN)

1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
STATURE	64.15	2.57	0.368	$= (0.915) * \text{WAIST FRONT}(\text{IN}) + (50.92)$	2.39
WAIST FRONT	14.46	1.03	0.368	$= (0.148) * \text{STATURE}(\text{IN}) + (4.97)$	0.96

SECTION IV

Double Male/Female Bivariates

TABLE 134

A BIVARIATE FREQUENCY TABLE FOR
BUST/CHEST CIRC AND BICEPS CIRC
1966 ARMY MEN / 1977 ARMY WOMEN

	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	48.0	49.0	50.0	TOTAL
18.0																									1/
17.5																									2/
17.0																									7/
16.5																									1/
16.0																									3/
15.5																									1/
15.0																									3/
14.5																									4/
14.0																									2/
13.5																									1/
13.0																									1/
12.5																									1/
12.0																									1/
11.5																									1/
11.0																									1/
10.5																									1/
10.0																									1/
9.5																									1/
9.0																									1/
8.5																									1/
8.0																									1/
TOTAL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1390

BICEPS CIRC(IN)

1966 ARMY MEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

BUST/CHEST CIRC 36.92 2.63 0.754 = (1.833)*BICEPS CIRC(IN)+(13.63) 1.73

BICEPS CIRC 12.70 1.08 0.754 = (0.310)*BUST/CHEST CIRC(IN)+(1.26) 0.71

1977 ARMY WOMEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

BUST/CHEST CIRC 34.72 2.49 0.718 = (2.004)*BICEPS CIRC(IN)+(13.52) 1.74

BICEPS CIRC 10.58 0.89 0.718 = (0.257)*BUST/CHEST CIRC(IN)+(1.65) 0.62

TABLE 135

A BIVARIATE FREQUENCY TABLE FOR
BUST/CHEST CIRC AND HIP CIRC
1966 ARMY MEN / 1977 ARMY WOMEN

BUST/CHEST CIRC.(IN)																									
	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	48.0	49.0	TOTAL	
53.0																	/ 1					1/	1		
62.0																									
51.0																			1/		1/			2/	
50.0																					1/			1/	
49.0																					2/			7/ 2	
48.0																	1/	1/			1/			14/ 3	
47.0																2/	3/	2/			1/			40/ 5	
46.0																5/	4/	1/			1/			70/ 14	
44.0																21/	8/	3/	2/					122/ 28	
43.0																14/	5/	1/						198/ 46	
42.0																3/	3/	4/						339/ 101	
41.0																2/	3/	1/						571/ 167	
40.0																3/	2/	1/						785/ 193	
39.0																4/	3/	1/						1036/ 241	
38.0																1/								1113/ 195	
37.0																3/	1/							1113/ 170	
36.0																4/								720/ 94	
35.0																107/	2/	53/						590/ 55	
34.0																2/								137/ 25	
33.0																4/	2/							34/ 6	
32.0																1/								4/ 2	
31.0																2/	1/								
30.0																1/									
TOTAL	1	3	9	15	58	63	217	476	795	1111	1052	911	712	518	339	166	130	70	39	22	11	13	4	6882	1390

STD ERROR

1966 ARMY MEN MEAN ST DEV R REGRESSION EQUATIONS
 BUST/CHEST CIRC 36.92 2.63 0.797 = (0.853)BUST CIRC(IN)+(5.28)
 HIP CIRC 37.09 2.46 0.797 = (0.745)BUST/CHEST CIRC(IN)+(9.59)

STD ERROR

1.59

1.48

STD ERROR

1977 ARMY WOMEN MEAN ST DEV R REGRESSION EQUATIONS
 BUST/CHEST CIRC 34.72 2.49 0.707 = (0.711)BUST CIRC(IN)+(7.99)
 HIP CIRC 37.59 2.48 0.707 = (0.703)BUST/CHEST CIRC(IN)+(13.19)

STD ERROR

1.76

1.75

TABLE 136

A BIVARIATE FREQUENCY TABLE FOR
BUST/CHEST CIRC AND SCYE CIRC
1966 ARMY MEN / 1977 ARMY WOMEN

	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	48.0	49.0	TOTAL
23.6																								2/
23.0																								2/
22.5																								17/
22.0																								20/
21.5																								49/
21.0																								66/
20.5																								118/
20.0																								219/
19.5																								345/
19.0																								569/
18.5																								776/
18.0																								1048/
17.5																								1137/
17.0																								930/
16.5																								222/
16.0																								422/
15.5																								168/
15.0																								53/
14.5																								24/
14.0																								24/
13.5																								5/
13.0																								1/
12.5																								1/
12.0																								1/
11.5																								1/
TOTAL	1	1	3	9	16	63	217	478	786	1111	1052	911	712	618	339	166	130	70	33	22	11	13	4	6002

STD ERROR

1.97

0.96

STD ERROR

1.63

0.62

REGRESSION EQUATIONS

 $BUST/CHEST CIRC(IN) = (1.364) \cdot SCYE CIRC(IN) + (12.99)$ $SCYE CIRC = (0.325) \cdot BUST/CHEST CIRC(IN) + (5.55)$

REGRESSION EQUATIONS

 $BUST/CHEST CIRC(IN) = (2.005) \cdot SCYE CIRC(IN) + (5.11)$ $SCYE CIRC = (0.287) \cdot BUST/CHEST CIRC(IN) + (4.80)$

TABLE 137

A BIVARIATE FREQUENCY TABLE FOR
BUST/CHEST CIRC AND SHOULDER CIRC
1966 ARMY MEN / 1977 ARMY WOMEN

BUST/CHEST CIRC.(IN)																											
27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	48.0	49.0	50.0	TOTAL			
57.0																				1/	2/		3/				
56.0																				2/	4/		1/				
55.0																				2/	1/		7/				
54.0																1/	3/						7/				
53.0																1/	8/	4/		5/			17/				
52.0														3/	6/	16/	6/	7/		1/		1/	49/				
51.0																22/	12/	5/	6/		2/		80/				
50.0																31/	30/	12/	5/	2/	2/		140/				
49.0																51/	32/	15/	6/	2/	2/		290/				
48.0																51/	24/	6/	4/	1/	2/		404/				
47.0																20/	7/						895/				
46.0																39/	3/	2/					935/				
45.0																4/	2/		1/				1132/				
44.0																1/	7/	1/					1036/				
43.0																1/	2/						829/				
42.0																10/	16/	10/	15/	2/	10/		570/				
41.0																3/	20/	1/	7/				280/				
40.0																1/	6/						108/				
39.0																							38/				
38.0																							6/				
37.0																							3/				
36.0																							9/				
35.0																							30/				
34.0																							1/				
33.0																							1/				
TOTAL	1	1	3	9	15	63	217	479	795	1111	1052	911	712	519	322	339	11	186	130	70	33	22	11	13	4	5682	1390

SHOULDER CIRC(IN)

1966 ARMY MEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
BUST/CHEST CIRC	36.92	2.63	0.855	$= (0.895) \cdot \text{SHOULDER CIRC(IN)} + (-2.96)$	1.37
SHOULDER CIRC	44.55	2.51	0.855	$= (0.816) \cdot \text{BUST/CHEST CIRC(IN)} + (14.43)$	1.31
1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
BUST/CHEST CIRC	34.72	2.49	0.823	$= (0.973) \cdot \text{SHOULDER CIRC(IN)} + (-3.73)$	1.42
SHOULDER CIRC	39.51	2.11	0.823	$= (0.695) \cdot \text{BUST/CHEST CIRC(IN)} + (15.38)$	1.20

TABLE 138

A BIVARIATE FREQUENCY TABLE FOR
BUST/CHEST CIRC AND SHOULDER LTH
1966 ARMY MEN / 1977 ARMY WOMEN

BURY/CHEAT CIRC(LIN)																										
	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	48.0	49.0	50.0	10762	
SHOULDER (LTH(IN))																										
10.0																1/									1/	
9.5																2/									1/	
9.0																2/									6/	
8.5									1/							9/				1/					11/	
8.0																5/									37/	
7.5									1/							4/									461/	
7.0									1/							3/				1/					2/	
6.5									1/							29/				2/					461/	
6.0									1/							28/				7/					1539/	
5.5									1/							84/				10/					85/	
5.0									1/							36/				3/					1805/	
4.5									1/							36/				6/					1805/	
4.0									1/							6/				1/					940/	
3.5									1/							21/				9/					937/	
3.0									1/							30/				3/					280/	
2.5									1/							10/				1/					96/	
2.0									1/							9/				2/					7/	
1.5									1/							6/				7/					1/	
1.0									1/							2/				2/					1/	
0.5									1/							2/				2/					1/	
0.0									1/							2/				2/					1/	
TOTAL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1</															

1966 ARMY MEN
BUST/CHEST CIRC
SHOULDER LTH

MEAN
36.92
6.38

ST DEV
2.63
0.78

R
0.153
0.153

REGRESSION EQUATIONS
BUST/CHEST CIRC = (0.516) * SHOULDER LTH + (33.62)
SHOULDER LTH = (0.045) * BUST/CHEST CIRC + (4.72)

STD ERROR
2.60
0.77

1977 ARMY WOMEN
BUST/CHEST CIRC
SHOULDER LTH

MEAN
34.72
5.90

ST DEV
2.49
0.42

R
0.117
0.117

REGRESSION EQUATIONS
BUST/CHEST CIRC = (0.700) * SHOULDER LTH + (30.59)
SHOULDER LTH = (0.020) * BUST/CHEST CIRC + (5.21)

STD ERROR
2.48
0.41

TABLE 139

A BIVARIATE FREQUENCY TABLE FOR
BUST/CHEST CIRC AND SLEEVE INSEAM
1966 ARMY MEN / 1977 ARMY WOMEN

	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	48.0	49.0	TOTAL
24.0																								1/
23.5																								2/
23.0																								25/
22.5																								60/
22.0																								109/
21.5																								362/
21.0																								882/
20.5																								1084/
20.0																								1228/
19.5																								1209/
19.0																								709/
18.5																								585/
18.0																								585/
17.5																								282/
17.0																								96/
16.5																								28/
16.0																								16/
15.5																								1/
15.0																								1/
14.0																								1/
TOTAL	1	3	1	9	15	63	217	478	786	1111	1082	911	712	518	399	106	130	70	33	22	11	13	4	6082

STD ERROR

1966 ARMY MEN
BUST/CHEST CIRC
SLEEVE INSEAM

REGRESSION EQUATIONS

R

ST DEV

MEAN

1966 ARMY MEN

BUST/CHEST CIRC

SLEEVE INSEAM

$BUST/CHEST CIRC = (0.409) \cdot SLEEVE INSEAM + (29.09)$
 $BUST/CHEST CIRC = (0.066) \cdot BUST/CHEST CIRC + (16.69)$

STD ERROR

1977 ARMY WOMEN
BUST/CHEST CIRC
SLEEVE INSEAM

REGRESSION EQUATIONS

R

ST DEV

MEAN

1977 ARMY WOMEN

BUST/CHEST CIRC

SLEEVE INSEAM

$BUST/CHEST CIRC = (0.291) \cdot SLEEVE INSEAM + (29.56)$
 $BUST/CHEST CIRC = (0.050) \cdot BUST/CHEST CIRC + (16.00)$

A BIVARIATE FREQUENCY TABLE FOR
BUST/CHEST CIRC AND WEIGHT
1966 ARMY MEN / 1977 ARMY WOMEN

[illegible]

	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
1966 ARMY MEN					
W8BUST/CHEST CIRC	36.92	2.63	0.849	= (0.096)*WEIGHT(ILB)+(21.64)	1.39
WEIGHT	159.10	23.35	0.849	= (7.531)*BUST/CHEST CIRC(IN)+(-118.92)	12.33
1977 ARMY WOMEN					
W8BUST/CHEST CIRC	34.72	2.49	0.808	= (0.107)*WEIGHT(ILB)+(20.58)	1.47
WEIGHT	132.11	18.76	0.808	= (6.081)*BUST/CHEST CIRC(IN)+(-79.01)	11.04

TABLE 141

A BIVARIATE FREQUENCY TABLE FOR
BUST/CHEST CIRC AND WRIST CIRC
1966 ARMY MEN / 1977 ARMY WOMEN

	27.00	28.00	29.00	30.00	31.00	32.00	33.00	34.00	35.00	36.00	37.00	38.00	39.00	40.00	41.00	42.00	43.00	44.00	45.00	46.00	47.00	48.00	49.00	TOTAL
8.75															1/									1/
8.50															2/									3/
8.25															3/									20/
8.00															4/									30/
7.75															5/									205/
7.50															6/									205/
7.25															7/									1657/
7.00															8/									9
6.75															9/									1439/
6.50															10/									406/
6.25															11/									97/
6.00															12/									422/
5.75															13/									5/
5.50															14/									167/
5.25															15/									25/
5.00															16/									1330/
TOTAL	1/	1/	1/	1/	1/	1/	1/	1/	1/	1/	1/	1/	1/	1/	1/	1/	1/	1/	1/	1/	1/	1/	1/	1/

1966 ARMY MEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

BUST/CHEST CIRC 36.92 2.63 0.497 = (3.794)WRIST CIRC(IN)+(11.44) 2.28

WRIST CIRC 6.72 0.34 0.497 = (0.065)BUST/CHEST CIRC(IN)+(4.32) 0.30

1977 ARMY WOMEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

BUST/CHEST CIRC 34.72 2.49 0.479 = (4.452)WRIST CIRC(IN)+(8.95) 2.19

WRIST CIRC 5.79 0.27 0.479 = (0.051)BUST/CHEST CIRC(IN)+(4.02) 0.24

A BIVARIATE FREQUENCY TABLE FOR
CROTCH HEIGHT AND ANKLE CIRC
1966 ARMY MEN / 1977 ARMY WOMEN

CROTCH HEIGHT (IN)																				
24.00	25.00	26.00	27.00	28.00	29.00	30.00	31.00	32.00	33.00	34.00	35.00	36.00	37.00	38.00	39.00	40.00	TOTAL			
12.00																				
11.76					1/						1/						2/			
11.50																				
11.26																				
11.00																				
10.76																				
10.50					2/															
10.26						1/														
10.00					2/	1/	21/	27/	40/	26/	16/	17/	7/							
9.76			2/	1/		9/	36/	1 66/	41/	47/	30/	14/	7/	1/						
9.50					3/	1 6/	1 32/	2 59/	88/	85/	62/	24/	16/	2/						
9.26				2/	1 6/	2 21/	3 60/	8 111/	4 199/	2 195/	148/	1 97/	42/	2/						
9.00				1/	1 3/	1 11/	6 26/	5 60/	10 145/	7 204/	3 206/	2 147/	2 105/	46/	21/	37/	984/			
8.76				3/	3/	1 7/	8 30/	23 92/	20 167/	7 235/	21 256/	9 195/	1 95/	40/	1 14/	2/	1137/			
8.50				2/	3/	6 11/	19 42/	47 111/	34 192/	23 277/	26 249/	5 180/	92/	1 33/	8/	2/	1201/			
8.26				1/	3 6/	16 12/	35 26/	49 51/	52 128/	31 172/	26 141/	13 85/	6 54/	20/	2/		895/			
8.00				1/	1 6/	3 21/	13 41/	21 46/	64 49/	81 47/	121 21/	97 4/	61 4/	25/	2/		497/			
7.76				1/	5 1/	19 6 55/	13 74 33/	59 33/	33 41/	19 41/	6 24/	2 13/	3/				210/			
7.50				1/	6 1/	17 2/	39 8 25/	9 16 6/	3 11/	4 2 1/							42/			
7.26				1/	3 1/	13 1 15/	2 10 1/	18 2/	6 3/	8 2/	1 1/						10/			
7.00				1/	4 1/	6 1 6/	10 4 1/	6 1 1/									3/			
6.76				1/	2 1/	3 1/											1/			
6.50				1/	2 1/												1/			
TOTAL	1	2	5	22	77	198	308	545	960	1451	1361	1020	909	258	94	17	9	6992	1330	

	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
1966 ARMY MEN					
CROTCH HEIGHT	33.05	1.84	0.162	= (0.527)*ANKLE CIRC(IN)+(28.34)	1.82
ANKLE CIRC	8.93	0.57	0.162	= (0.050)*CROTCH HEIGHT(IN)+(7.28)	0.56
1977 ARMY WOMEN					
CROTCH HEIGHT	30.07	1.72	0.231	= (0.812)*ANKLE CIRC(IN)+(23.44)	1.68
ANKLE CIRC	8.16	0.49	0.231	= (0.066)*CROTCH HEIGHT(IN)+(6.18)	0.48

TABLE 143

A BIVARIATE FREQUENCY TABLE FOR
CROTCH HEIGHT AND HIP CIRC
1966 ARMY MEN / 1977 ARMY WOMEN

	24.0	25.0	26.0	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	TOTAL
53.0					1/				/ 1									1/ 1
52.0																		
51.0																		
50.0							1/						1/					2/
49.0					1/				/ 1									1/ 1
48.0							/ 1				2/	1/	1/					5/ 1
47.0								1/ 2			4/	1/	1/					7/ 2
46.0		1/									6/ 1	3/	1/					14/ 3
45.0								1/ 2	2/	6/ 1	3/	6/	5/	4/				40/ 5
44.0						1/		3/ 1	4/ 2	6/ 2	6/	12/	12/	3/	2/			70/ 14
43.0								5/ 4	13/ 5	16/ 6	30/ 5	22/ 2	15/ 1	8/	3/	1/		122/ 28
42.0								1/ 2	1/ 9	14/ 10	21/ 9	37/ 6	31/ 3	39/ 1	20/ 1	12/		188/ 46
41.0								4/ 12	8/ 18	28/ 26	41/ 20	70/ 14	60/ 4	57/ 3	34/	25/	1/	339/ 101
40.0								10/ 23	13/ 34	47/ 37	63/ 18	116/ 28	113/ 6	91/ 3	58/	30/ 1	9/	571/ 157
39.0								3/ 2	3/ 14	6/ 30	22/ 41	45/ 42	114/ 32	172/ 21	160/ 8	131/ 2	80/ 1	785/ 193
38.0								1/ 3	6/ 22	5/ 34	39/ 69	89/ 48	165/ 36	226/ 16	209/ 9	154/ 3	99/ 1	1036/ 241
37.0								1/ 2	7/ 2	12/ 34	19/ 59	78/ 38	160/ 21	242/ 13	244/ 4	184/ 3	110/ 40/	1113/ 195
36.0								1/ 4	3/ 8	10/ 21	23/ 23	66/ 13	110/ 9	169/ 3	169/ 1	99/ 1	45/ 20/	1113/ 170
35.0								1/ 4	3/ 8	10/ 21	23/ 23	66/ 13	110/ 9	169/ 3	169/ 1	99/ 1	45/ 20/	720/ 84
34.0								1/ 4	3/ 8	10/ 21	23/ 23	66/ 13	110/ 9	169/ 3	169/ 1	99/ 1	45/ 20/	380/ 55
33.0								1/ 4	3/ 8	10/ 21	23/ 23	66/ 13	110/ 9	169/ 3	169/ 1	99/ 1	45/ 20/	137/ 26
32.0								1/ 4	3/ 8	10/ 21	23/ 23	66/ 13	110/ 9	169/ 3	169/ 1	99/ 1	45/ 20/	34/ 6
31.0								1/ 4	3/ 8	10/ 21	23/ 23	66/ 13	110/ 9	169/ 3	169/ 1	99/ 1	45/ 20/	4/ 2
30.0								1/ 4	3/ 8	10/ 21	23/ 23	66/ 13	110/ 9	169/ 3	169/ 1	99/ 1	45/ 20/	6682
TOTAL	1	7	34	104	218	308	545	778	990	1451	1391	1020	609	256	94	17	6	1330

HIP CIRC(IN)

1966 ARMY MEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
CROTCH HEIGHT	33.05	1.84	0.097	$= (0.072) \times \text{HIP CIRC(IN)} + (30.38)$	1.83
HIP CIRC	37.09	2.46	0.097	$= (0.129) \times \text{CROTCH HEIGHT(IN)} + (32.83)$	2.45
1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
CROTCH HEIGHT	30.07	1.72	0.260	$= (0.181) \times \text{HIP CIRC(IN)} + (23.26)$	1.66
HIP CIRC	37.59	2.48	0.260	$= (0.374) \times \text{CROTCH HEIGHT(IN)} + (26.35)$	2.39

TABLE 144

A BIVARIATE FREQUENCY TABLE FOR
CROTCH HEIGHT AND STATURE
1966 ARMY MEN / 1977 ARMY WOMEN

	24.0	25.0	26.0	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	TOTAL
79.0	1													1				1
78.0													2	1	4	1	1	9
77.0													1	2	4	3	1	11
76.0											2	4	13	16	4	1	39	97
75.0										2	6	12	38	22	3	2	87	199
74.0									3	10	29	68	56	31	2		199	476
73.0								1	10	37	92	115	58	13	2	1	372	773
72.0								1	31	102	214	214	2	4	1		544	937
71.0							2	5	19	79	215	527	314	28	1	1	773	1043
70.0							1	12	58	323	937	920	541	9			937	970
69.0							3	34	135	936	243	513	523	2			1043	761
68.0							2	10	72	924	333	77	46	1			970	476
67.0							7	33	5	109	292	44	23	1			761	235
66.0																	235	135
65.0																	135	58
64.0																	58	32
63.0																	32	122
62.0																	122	9
61.0																	9	80
60.0																	80	1
59.0																	1	36
58.0																	36	18
57.0																	18	7
56.0																	7	1
TOTAL	1	5	7	34	22	104	77	198	308	545	990	1451	1391	1020	609	256	94	1330

1966 ARMY MEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
CROTCH HEIGHT	33.05	1.84	0.819	$= (0.579) \times \text{STATURE}(\text{IN}) + (-6.73)$	1.06
STATURE	68.71	2.60	0.819	$= (1.158) \times \text{CROTCH HEIGHT}(\text{IN}) + (30.44)$	1.49
1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
CROTCH HEIGHT	30.07	1.72	0.861	$= (0.579) \times \text{STATURE}(\text{IN}) + (-7.08)$	0.88
STATURE	64.15	2.57	0.861	$= (1.282) \times \text{CROTCH HEIGHT}(\text{IN}) + (25.61)$	1.30

TABLE 145

A BIVARIATE FREQUENCY TABLE FOR
CROTCH HEIGHT AND UPPER THIGH CIRC
1966 ARMY MEN / 1977 ARMY WOMEN

		CROTCH HEIGHT (IN)																		
		24.0	25.0	26.0	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0		
31.0	1											1/							1/	
30.0												1/	1/	1/	1/				4/	
29.0												1/	2/	5/	1/	2/			10/	4/
28.0												1/	3/	5/	3/	3/	1/		26/	10/
27.0												1/	4/	13/	10/	3/	4/	1/	100/	26/
26.0												1/	2/	9/	16/	1/			233/	49/
25.0												1/	4/	10/	24/	1/			496/	136/
24.0												1/	3/	7/	12/	5/	2/		816/	253/
23.0												1/	4/	10/	16/	5/	1/		1262/	313/
22.0												1/	3/	7/	16/	6/	1/		1376/	263/
21.0												1/	4/	10/	18/	2/	1/		1254/	163/
20.0												1/	3/	7/	12/	5/	2/	1/	748/	88/
19.0												1/	2/	5/	9/	2/			283/	27/
18.0												1/	1/	3/	1/				69/	7/
17.0												1/	1/	2/					12/	1/
16.0												1/	1/	1/					1/	
TOTAL		1	5	7	34	22	104	77	198	545	279	990	1451	1391	1020	609	256	94	6682	1330

UPPER THIGH CIRC (IN)

		MEAN	ST DEV	R	REGRESSION EQUATIONS		STD ERROR
1966 ARMY MEN							
CROTCH HEIGHT	33.05	1.84	0.013	=	(0.012)*UPPER THIGH CIRC(IN)+(32.79)		1.84
UPPER THIGH CIRC	21.82	1.89	0.013	=	(0.013)*CROTCH HEIGHT(IN)+(21.39)		1.89
1977 ARMY WOMEN							
CROTCH HEIGHT	30.07	1.72	0.184	=	(0.177)*UPPER THIGH CIRC(IN)+(26.10)		1.69
UPPER THIGH CIRC	22.40	1.79	0.184	=	(0.191)*CROTCH HEIGHT(IN)+(16.66)		1.76

TABLE 146

A BIVARIATE FREQUENCY TABLE FOR
FOOT BREADTH AND FOOT CIRC
1966 ARMY MEN / 1977 ARMY WOMEN

	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50	4.75	5.00	TOTAL
12.50										1/	1/
12.25											
12.00											
11.75								5/			5/
11.50						1/	13/	23/	2/		8/
11.25						3/	32/	46/	8/		39/
11.00											89/
10.75					1/	17/	109/	71/	7/		204/
10.50					10/	137/	290/	1 83/	2/		522/ 1
10.25					22/	307/	361/	4 40/ 1	1/		731/ 5
10.00					109/	691/	7 374/	6 26/			1190/ 13
9.75				2/	300/	13 666/	11 175/	3 6/			1149/ 27
9.50			1/	6/	421/	36 497/	32 69/	6/			999/ 70
9.25			/ 1	22/	9 469/	166 258/	34 50/	1 6/			806/ 201
9.00			2/	48/	52 272/	151 99/	10 24/	2/			447/ 213
8.75			2/	4 44/	143 120/	132 50/	4 9/				225/ 283
8.50			2/	24 31/	196 71/	63 65/	8/				177/ 273
8.25			/ 44	16/	105 20/	7 12/					48/ 166
8.00		/ 4	1/	42 7/	18 16/	1					24/ 65
7.75		/ 6	1/	13 4/	3 12/						17/ 22
7.50			/ 1	1/							1/ 1
7.25				1/							1/
TOTAL	10	9	129	182	1843	2793	1513	319	22	1	6682
							98	15			1330

FOOT CIRC(IN)

1966 ARMY MEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
FOOT BREADTH	3.87	0.22	0.710	$= (0.262) * \text{FOOT CIRC(IN)} + (1.29)$	0.15
FOOT CIRC	9.85	0.58	0.710	$= (1.924) * \text{FOOT BREADTH(IN)} + (2.40)$	0.41
1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
FOOT BREADTH	3.49	0.20	0.847	$= (0.382) * \text{FOOT CIRC(IN)} + (0.09)$	0.11
FOOT CIRC	8.90	0.45	0.847	$= (1.880) * \text{FOOT BREADTH(IN)} + (2.34)$	0.24

TABLE 147

A BIVARIATE FREQUENCY TABLE FOR
FOOT BREADTH AND HEEL BREADTH
1966 ARMY MEN / 1977 ARMY WOMEN

FOOT BREADTH(IN)														
2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50	4.75	5.00	TOTAL				
3.60						1/	2/			3/				
3.50						1/	1/			2/				
3.40														
3.30			1/	1/	5/	8/	1/			16/				
3.20				4/	16/	8/	1/			29/				
3.10			2/	28/	54/	27/	4/	1/		116/				
3.00		2/	6/	55/	92/	38/	5/			198/				
2.90		2/	60/	249/	1 264/	2 86/	2/			643/ 3				
2.80		/ 1	4/ 3	97/ 4	292/ 3	227/ 1	66/ 1	3/		679/ 13				
2.70			9/ 2	323/ 25	719/ 11	386/ 6	63/	4/		1504/ 44				
2.60			1/	27/ 15	339/ 36	594/ 13	261/ 3	27/	1/	1240/ 67				
2.50			3/ 9	57/ 40	563/108	693/ 32	170/ 1	18/	1/	1406/ 190				
2.40			2/ 16	50/142	353/173	214/ 24	41/ 2	5/		865/ 357				
2.30	/ 1	2/ 28	14/134	67/114	34/ 11	4/				121/ 288				
2.20		/ 49	16/137	27/ 70	9/ 2	1/				53/ 258				
2.10	/ 5	1/ 16	1/ 37	3/ 17	1/ 1					6/ 76				
2.00	/ 2	/ 10	/ 16	2/ 4						2/ 32				
1.90	/ 2									/ 2				
TOTAL	10/	9	182	1843	2793	1513	319	22	1	6682				
			129	526	551	98	15	1		1330				

HEEL BREADTH (IN)

1966 ARMY MEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
FOOT BREADTH	3.87	0.22	0.499	$= (0.582) * \text{HEEL BREADTH (IN)} + (2.30)$	0.19
HEEL BREADTH	2.70	0.18	0.499	$= (0.429) * \text{FOOT BREADTH (IN)} + (1.04)$	0.16
1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
FOOT BREADTH	3.49	0.20	0.503	$= (0.630) * \text{HEEL BREADTH (IN)} + (1.98)$	0.18
HEEL BREADTH	2.40	0.16	0.503	$= (0.402) * \text{FOOT BREADTH (IN)} + (0.99)$	0.14

TABLE 148

A BIVARIATE FREQUENCY TABLE FOR
FOOT LENGTH AND FOOT BREADTH
1966 ARMY MEN / 1977 ARMY WOMEN

		FOOT LENGTH(IN)																				
		8.00	8.25	8.50	8.75	9.00	9.25	9.50	9.75	10.00	10.25	10.50	10.75	11.00	11.25	11.50	11.75	12.00	12.25	12.50	12.75	TOTAL
5.00																						1 /
4.75																						22 /
4.50																						319 / 1
4.25																						1513 / 15
4.00																						2793 / 98
3.75																						1843 / 551
3.50																						182 / 526
3.25																						9 / 129
3.00																						9 / 10
2.75																						6882 / 1330
TOTAL		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1330

		MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
1966 ARMY MEN						
FOOT LENGTH		10.54	0.51	0.541	$= (1.286) \# \text{FOOT BREADTH(IN)} + (5.56)$	0.43
FOOT BREADTH		3.87	0.22	0.541	$= (0.227) \# \text{FOOT LENGTH(IN)} + (1.48)$	0.18
1977 ARMY WOMEN						
FOOT LENGTH		9.57	0.49	0.531	$= (1.290) \# \text{FOOT BREADTH(IN)} + (5.07)$	0.42
FOOT BREADTH		3.49	0.20	0.531	$= (0.219) \# \text{FOOT LENGTH(IN)} + (1.39)$	0.17

TABLE 149

A BIVARIATE FREQUENCY TABLE FOR
FOOT LENGTH AND FOOT CIRC
1966 ARMY MEN / 1977 ARMY WOMEN

	8.00	8.25	8.50	8.75	9.00	9.25	9.50	9.75	10.00	10.25	10.50	10.75	11.00	11.25	11.50	11.75	12.00	12.25	12.50	12.75	TOTAL
12.50																1/					1/
12.25																		1/			
12.00																	1/				5/
11.75																3/	2/	2/			6/
11.50																	2/	2/			39/
11.25																	8/	9/	2/		89/
11.00																				1/	204/
10.75																	8/	1/			522/
10.50																	6/	1/			731/
10.25																					6
10.00																	3/				1190/
9.75																	2/	1/			1149/
9.50																	3/	1/			999/
9.25																					70
9.00																					447/
8.75																					225/
8.50																					177/
8.25																					48/
8.00																					24/
7.75																					17/
7.50																					1/
7.25																					1/
TOTAL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6862

1966 ARMY MEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
FOOT LENGTH	10.54	0.51	0.493	$= (0.433) \cdot \text{FOOT CIRC} + (6.28)$	0.45
FOOT CIRC	9.85	0.58	0.493	$= (0.562) \cdot \text{FOOT LENGTH} + (3.93)$	0.51
1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
FOOT LENGTH	9.57	0.49	0.592	$= (0.648) \cdot \text{FOOT CIRC} + (3.81)$	0.40
FOOT CIRC	8.90	0.45	0.592	$= (0.540) \cdot \text{FOOT LENGTH} + (3.73)$	0.36

TABLE 150

INSTEP LENGTH IN)

	1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS
FOOT LENGTH		9.57	0.49	0.926	$= (1.176) * \text{INSTEP LENGTH}(IN) + (1.31)$
INSTEP LENGTH		7.03	0.39	0.926	$= (0.729) * \text{FOOT LENGTH}(IN) + (0.05)$

STD ERROR	0.19	0.15
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TABLE 151

A BIVARIATE FREQUENCY TABLE FOR
HAND BREADTH AND HAND LENGTH
1966 ARMY MEN / 1977 ARMY WOMEN

HAND BREADTH(IN)												
2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	TOTAL				
9.50						1/						1/
9.25					1/	5/						6/
9.00					4/	3/	1/					8/
8.75					14/	18/	8/					41/
8.50			1/	5/	68/	37/	10/					121/
8.25			2/	57/	1 249/	94/	13/					415/
8.00			16/	2 245/	7 644/	1 165/	21/					1092/
7.75		1/	1 60/	25 534/	29 779/	1 126/	9/					1509/
7.50		2/	7 93/	63 725/	44 689/	2 85/	1/					1595/
7.25		7/	32 184/	192 763/	55 367/	2 30/	2/					1343/
7.00		8/	110 125/	196 225/	33 69/	3/						430/
6.75		/	5 1/	136 41/	160 44/	14 5/						91/
6.50		/	4 5/	119 17/	53 6/							28/
6.25		/	3 1/	23 /	5							1/
6.00		/	1 /	4								/
5.75												5
TOTAL	13	26	432	539	2605	2879	567	65	6681	1330		

HAND LENGTH (IN)

1966 ARMY MEN

HAND BREADTH

HAND LENGTH

MEAN

3.50

ST DEV

0.19

R

0.522

REGRESSION EQUATIONS

= (0.266)*HAND LENGTH(IN)+(1.51)

STD ERROR

0.16

0.32

1977 ARMY WOMEN

HAND BREADTH

HAND LENGTH

MEAN

3.08

ST DEV

0.15

R

0.602

REGRESSION EQUATIONS

= (0.259)*HAND LENGTH(IN)+(1.30)

STD ERROR

0.12

0.28

TABLE 152

A BIVARIATE FREQUENCY TABLE FOR
HAND BREADTH AND PALM LENGTH
1966 ARMY MEN / 1977 ARMY WOMEN

HAND BREADTH(IN)													
	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	TOTAL				
5.25						5/	6/	1/					12 /
5.00				1/	8/	39/	28/	6/					82 /
4.75				4/	1 79/	2 293/	95/	16/					487 / 3
4.50			1/	4	61/ 34	593/ 30	112/ 2	206/	22/				1995 / 70
4.25					5/ 38	192/186	199/ 78	996/ 2	179/	17/			2588 / 304
4.00			/	6	12/202	207/322	595/ 62	386/ 2	45/	3/			1228 / 593
3.75		/	8	6/169	71/147	120/ 11	68/	8/					273 / 335
3.50				2/ 18	3/ 6	10/							15 / 24
3.25			/	1		1/							1 / 1
3.00													
TOTAL		13	26	539	2605	2879	567	65	6681				1330
			432	696	183	6							

1966 ARMY MEN

HAND BREADTH

PALM LENGTH

MEAN ST DEV

3.50

0.19

R

0.398

REGRESSION EQUATIONS

= (0.311)*PALM LENGTH(IN)+(2.21)

STD ERROR

0.18

1977 ARMY WOMEN

HAND BREADTH

PALM LENGTH

MEAN ST DEV

3.08

0.15

R

0.483

REGRESSION EQUATIONS

= (0.359)*PALM LENGTH(IN)+(1.68)

STD ERROR

0.13

0.18

TABLE 153

A BIVARIATE FREQUENCY TABLE FOR
HAND CIRC AND HAND BREADTH
1966 ARMY MEN / 1977 ARMY WOMEN

HAND BREADTH (IN)	HAND CIRC (IN)																			TOTAL
	6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50	8.75	9.00	9.25	9.50	9.75	10.00	10.25	10.50	
4.25																				
4.00																				
3.75																				
3.50																				
3.25																				
3.00																				
2.75																				
2.50																				
TOTAL	1	1	5	6	17	2/203	35/343	115/120	223/13	105/1	41/2	14/3	4/	9/	17/	15/	13/	4/	3/	66/

1966 ARMY MEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
HAND CIRC	8.51	0.45	0.753	$= (1.744) * \text{HAND BREADTH (IN)} + (2.40)$	0.29
HAND BREADTH	3.50	0.19	0.753	$= (0.325) * \text{HAND CIRC (IN)} + (0.74)$	0.13
1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
HAND CIRC	7.26	0.34	0.933	$= (2.058) * \text{HAND BREADTH (IN)} + (0.93)$	0.12
HAND BREADTH	3.08	0.15	0.933	$= (0.423) * \text{HAND CIRC (IN)} + (0.01)$	0.06

TABLE 154

A BIVARIATE FREQUENCY TABLE FOR
HAND CIRC AND HAND LENGTH
1966 ARMY MEN / 1977 ARMY WOMEN

	6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50	8.75	9.00	9.25	9.50	9.75	10.00	10.25	10.50	TOTAL
HAND CIRC(IN)																				
9.50																				
9.25																				
9.00																				
8.75																				
8.50																				
8.25																				
8.00																				
7.75																				
7.50																				
7.25																				
7.00																				
6.75																				
6.50																				
6.25																				
6.00																				
TOTAL	1	11	73	197	376	49	169	201	298	412	542	910	484	298	69	27	14	1	6692	1330

1966 ARMY MEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
HAND CIRC	8.51	0.45	0.496	$= (0.586) \times \text{HAND LENGTH}(IN) + (4.12)$	0.39
HAND LENGTH	7.49	0.38	0.496	$= (0.420) \times \text{HAND CIRC}(IN) + (3.92)$	0.33
1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
HAND CIRC	7.26	0.34	0.592	$= (0.563) \times \text{HAND LENGTH}(IN) + (3.40)$	0.27
HAND LENGTH	6.87	0.36	0.592	$= (0.623) \times \text{HAND CIRC}(IN) + (2.34)$	0.29

TABLE 155

A BIVARIATE FREQUENCY TABLE FOR
HAND CIRC AND PALM LENGTH
1966 ARMY MEN / 1977 ARMY WOMEN

		HAND CIRC (IN)																TOTAL
		6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50	8.75	9.00	9.25	9.50	9.75	
6.25																		
6.00																		
5.75																		
5.50																		
5.25																		
5.00																		
4.75																		
4.50																		
4.25																		
4.00																		
3.75																		
3.50																		
3.25																		
3.00																		
TOTAL		11	73	197	376	49	169	201	667	1030	1412	1642	910	484	298	89	27	1330

1966 ARMY MEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
HAND CIRC	8.51	0.45	0.419	$= (0.758) \cdot \text{PALM LENGTH (IN)} + (5.34)$	0.41
PALM LENGTH	4.17	0.25	0.419	$= (0.232) \cdot \text{HAND CIRC (IN)} + (2.20)$	0.22
1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
HAND CIRC	7.26	0.34	0.473	$= (0.775) \cdot \text{PALM LENGTH (IN)} + (4.25)$	0.30
PALM LENGTH	3.89	0.21	0.473	$= (0.288) \cdot \text{HAND CIRC (IN)} + (1.80)$	0.18

TABLE 156

A BIVARIATE FREQUENCY TABLE FOR
HEAD BREADTH AND HEAD CIRC
1966 ARMY MEN / 1977 ARMY WOMEN

HEAD BREADTH(IN)													
5.00	5.25	5.50	5.75	6.00	6.25	6.50	6.75	7.00	TOTAL				
25.25								1/	1/				
25.00													
24.75													
24.50									1/				
24.25					3/	2/			5/				
24.00			1/	4/ 1	2/	1/			8/ 1				
23.75			2/	4/	13/ 1	2/	1/		22/ 1				
23.50		1/ 1	4/ 2	28/	28/ 1	7/	1/		69/ 4				
23.25		/ 1	11/ 5	54/ 6	61/ 2	11/	2/		139/ 13				
23.00	1/	6/ 1	28/ 2	129/ 4	83/ 3	18/	2/		268/ 10				
22.75	1/	4/ 6	101/ 12	262/ 11	137/ 7	28/			523/ 36				
22.50	2/	18/ 9	181/ 30	327/ 11	149/ 2	24/			701/ 62				
22.25	2/ 1	43/ 27	262/ 43	384/ 16	117/ 4	7/			815/ 91				
22.00	1/	6/ 6	105/ 46	445/ 66	441/ 24	142/ 5	10/		1149/ 147				
21.75		6/ 3	140/ 77	412/ 71	384/ 19	93/ 4	3/		1008/ 174				
21.50	1/	9/ 10	155/ 112	385/ 74	220/ 9	39/	3/		792/ 205				
21.25	/ 1	14/ 16	161/ 126	274/ 73	180/ 13	18/			827/ 229				
21.00	/ 1	10/ 17	107/ 94	115/ 31	53/ 4	4/ 1	1/		290/ 148				
20.75		8/ 22	57/ 69	72/ 13	22/ 2	2/			161/ 106				
20.50	/ 2	10/ 25	34/ 38	23/ 6	3/	1/			71/ 71				
20.25	1/ 1	4/ 8	12/ 15	7/ 1	1/				25/ 28				
20.00	/ 2	1/ 6	8/ 6	/ 1					9/ 14				
19.75			/ 1						/ 1				
19.50	3	73	850	2303	2446	882	118	7	6882				
TOTAL	7	115	828	431	1119	30	30	7	1330				

1966 ARMY MEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
HEAD BREADTH	6.01	0.23	0.525	= (0.191)*HEAD CIRC(IN)+(1.79)	0.20
HEAD CIRC	22.09	0.63	0.525	= (1.442)*HEAD BREADTH(IN)+(13.43)	0.54
1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
HEAD BREADTH	5.75	0.21	0.548	= (0.180)*HEAD CIRC(IN)+(1.86)	0.18
HEAD CIRC	21.62	0.64	0.548	= (1.667)*HEAD BREADTH(IN)+(12.03)	0.54

TABLE 157

A BIVARIATE FREQUENCY TABLE FOR
HEAD LENGTH AND HEAD BREADTH
1966 ARMY MEN / 1977 ARMY WOMEN

		HEAD LENGTH(IN)														TOTAL
		6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50	8.75	9.00	TOTAL		
HEAD BREADTH(IN)	7.00							2/	4/			1/			7/	
	6.75					21/	35/	34/	15/		4/	1/			118/	
	6.50			1/	7/	6/	1 80/	5 167/	13 262/	5 261/	6 107/	23/	6/		882/ 30	
	6.25					2 24/	8 173/	27 445/	38 734/	26 724/	15 286/	2 53/	8/		2446/ 119	
	6.00			/	2	4 24/	25 161/	99 442/	141 762/	121 718/	39 166/	2 27/	2/	1/	2303/ 431	
	5.75			1/	4	24/ 25	161/ 99	442/ 141	762/ 121	718/ 39	166/ 2	27/	2/		950/ 629	
	5.50			/	2	1/ 7	7/ 42	93/ 169	182/ 240	303/ 133	234/ 30	35/ 5	6/		73/ 115	
	5.25					1/ 12	8/ 43	16/ 45	28/ 15	14/	4/		2/		3/ 7	
	5.00				/	1	/	3	1/ 2	1/ 1	1/					
TOTAL		2	2	63	492	1274	2116	1990	612	112	20	1	6682	1330		

		REGRESSION EQUATIONS		STD ERROR	
1966 ARMY MEN	MEAN	ST DEV	R		
HEAD LENGTH	7.66	0.29	0.109	= (0.137)*HEAD BREADTH(IN)+(6.84)	0.29
HEAD BREADTH	6.01	0.23	0.109	= (0.087)*HEAD LENGTH(IN)+(5.34)	0.23
1977 ARMY WOMEN	MEAN	ST DEV	R		
HEAD LENGTH	7.37	0.26	0.161	= (0.201)*HEAD BREADTH(IN)+(6.21)	0.26
HEAD BREADTH	5.75	0.21	0.161	= (0.129)*HEAD LENGTH(IN)+(4.80)	0.21

TABLE 158

A BIVARIATE FREQUENCY TABLE FOR
HEAD LENGTH AND HEAD CIRC
1966 ARMY MEN / 1977 ARMY WOMEN

	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50	8.75	9.00	TOTAL
25.25											1/		1/
25.00													
24.75											1/		1/
24.50								1/	3/	1/			6/
24.25								2/ 1	2/	3/	1/		8/ 1
24.00								1/ 1	7/	6/			22/ 1
23.75						1/		7/ 2	34/ 1	24/	4/		69/ 4
23.50						2/ 6	38/ 6	67/ 3	32/				139/ 13
23.25						12/ 3	109/ 6	124/ 1	19/	2/			266/ 10
23.00					1/ 1	8/ 7	53/ 9	271/ 16	173/ 3	14/	3/		523/ 36
22.75					2/	14/ 6	180/ 23	412/ 23	106/	7/			701/ 52
22.50					1/ 3	44/ 17	268/ 64	446/ 17	67/				815/ 91
22.25					10/ 11	169/ 49	529/ 76	422/ 12	28/				1148/ 147
22.00					38/ 18	271/ 77	486/ 71	190/ 8	12/	2/			1008/ 174
21.75					2/ 1	71/ 44	291/ 118	362/ 42	76/	1/			792/ 205
21.50					6/ 12	136/ 76	284/ 128	187/ 16	16/ 1				627/ 229
21.25					17/ 14	95/ 72	134/ 59	41/ 3	3/				290/ 148
21.00					3/ 3	17/ 18	86/ 72	44/ 13	13/	1/			161/ 108
20.75					2/ 2	11/ 22	38/ 41	19/ 6	4/	1/			71/ 71
20.50					1/ 3	7/ 15	14/ 8	3/					26/ 26
20.25					1/ 1	1/ 4	2/ 8	3/ 1	3/				9/ 14
20.00					1/								1/ 1
19.75					2/	13/							1/ 1
19.50					2/	83/	492/	1274/	1990/	612/	112/	20/	6882/
TOTAL	2/	2/	13/	63/	348/	479/	2118/	300/	91/	9/	1/	1/	1330/

HEAD CIRC(IN)

1966 ARMY MEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
HEAD LENGTH	7.66	0.29	0.788	$= (0.360) * \text{HEAD CIRC}(\text{IN}) + (-0.29)$	0.18
HEAD CIRC	22.09	0.63	0.788	$= (1.729) * \text{HEAD LENGTH}(\text{IN}) + (8.84)$	0.39
1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
HEAD LENGTH	7.37	0.26	0.796	$= (0.326) * \text{HEAD CIRC}(\text{IN}) + (0.32)$	0.16
HEAD CIRC	21.62	0.64	0.796	$= (1.943) * \text{HEAD LENGTH}(\text{IN}) + (7.31)$	0.39

TABLE 159

A BIVARIATE FREQUENCY TABLE FOR
HIP BREADTH AND HIP CIRC
1966 ARMY MEN / 1977 ARMY WOMEN

HIP BREADTH (IN)

	10.5	11.0	11.5	12.0	12.5	13.0	13.5	14.0	14.5	15.0	15.5	16.0	16.5	17.0	17.5	18.0	18.5	19.0	19.5	20.0	TOTAL
53.0																					1
52.0																					1
51.0																					1
50.0																					2
49.0																					1
48.0																					6
47.0																					7
46.0																					14
45.0																					40
44.0																					70
43.0																					123
42.0																					188
41.0																					398
40.0																					671
39.0																					785
38.0																					1036
37.0																					1113
36.0																					1113
35.0																					720
34.0																					380
33.0																					137
32.0																					34
31.0																					4
30.0																					1
TOTAL	10	74	368	1104	1784	1491	1018	506	203	64	25	47	102	166	249	296	223	142	784	1104	1390

HIP CIRC (IN)

1966 ARMY MEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
HIP BREADTH	13.07	0.79	0.859	$= (0.276) \times \text{HIP CIRC (IN)} + (2.83)$	0.40
HIP CIRC	37.09	2.46	0.859	$= (2.673) \times \text{HIP BREADTH (IN)} + (2.15)$	1.26
1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
HIP BREADTH	13.92	0.96	0.906	$= (0.352) \times \text{HIP CIRC (IN)} + (0.69)$	0.41
HIP CIRC	37.59	2.48	0.906	$= (2.333) \times \text{HIP BREADTH (IN)} + (5.12)$	1.05

TABLE 160

A BIVARIATE FREQUENCY TABLE FOR
HIP BREADTH AND WEIGHT
1966 ARMY MEN / 1977 ARMY WOMEN

	10.5	11.0	11.5	12.0	12.5	13.0	13.5	14.0	14.5	15.0	15.5	16.0	16.5	17.0	17.5	18.0	18.5	19.0	19.5	TOTAL
280.0																				1 /
275.0																				3 /
270.0																				1 /
265.0																				4 /
260.0																				1 /
255.0																				7 /
250.0																				11 /
245.0																				19 /
240.0																				13 /
235.0																				21 /
230.0																				43 /
225.0																				67 /
220.0																				71 /
215.0																				98 /
210.0																				121 /
205.0																				161 /
200.0																				200 /
195.0																				235 /
190.0																				313 /
185.0																				378 /
180.0																				434 /
175.0																				552 /
170.0																				684 /
165.0																				830 /
160.0																				931 /
155.0																				1114 /
150.0																				1338 /
145.0																				167 /
140.0																				185 /
135.0																				267 /
130.0																				353 /
125.0																				458 /
120.0																				584 /
115.0																				680 /
110.0																				830 /
105.0																				931 /
100.0																				1114 /
95.0																				1338 /
90.0																				167 /
85.0																				185 /
80.0																				267 /
75.0																				353 /
70.0																				458 /
65.0																				584 /
60.0																				680 /
55.0																				830 /
50.0																				931 /
45.0																				1114 /
40.0																				1338 /
35.0																				167 /
30.0																				185 /
25.0																				267 /
20.0																				353 /
15.0																				458 /
10.0																				584 /
5.0																				680 /
0.0																				830 /
TOTAL	74	398	1103	1783	2498	3298	4177	5066	5966	6866	7766	8666	9566	10466	11366	12266	13166	14066	14966	15866

1966 ARMY MEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR
 HIP BREADTH 13.07 0.79 0.816 = (0.028)*WEIGHT(LB)+(8.62) 0.46
 WEIGHT 159.10 23.35 0.816 = (24.094)*HIP BREADTH(IN)+(-155.82) 13.51

1977 ARMY WOMEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR
 HIP BREADTH 13.92 0.96 0.801 = (0.041)*WEIGHT(LB)+(8.50) 0.58
 WEIGHT 132.11 18.76 0.801 = (15.591)*HIP BREADTH(IN)+(-84.92) 11.24

TABLE 161

A BIVARIATE FREQUENCY TABLE FOR
HIP CIRC AND UPPER THIGH CIRC
1966 ARMY MEN / 1977 ARMY WOMEN

	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0	TOTAL
31.0																									1 /
30.0												1 / 1				3 /	2 /	2 / 1	1 /		1 /				4 /
29.0										1 /		1 /	2 /	3 / 2	4 / 5	7 / 1	5 / 1	1 / 1	1 /				1 / 1		10 / 4
28.0										1 /		12 / 2	18 / 3	23 / 11	20 / 5	16 / 2	5 / 2	1 /							26 / 10
27.0										2 /	2 /	7 / 1	36 / 8	55 / 13	43 / 6	24 / 4	8 / 2	2 /	1 /		1 /				100 / 26
26.0										8 /	29 / 2	63 / 15	154 / 45	128 / 45	64 / 20	31 / 8	13 /								233 / 49
25.0										42 /	42 /	88 / 21	123 / 72	100 / 34	34 / 6	13 /									495 / 136
24.0										11 /	100 / 15	247 / 68	380 / 127	324 / 70	126 / 27	30 / 5	16 /	1 /							816 / 253
23.0										3 /	16 /	100 / 16	247 / 68	380 / 127	324 / 70	126 / 27	30 / 5	16 /							1282 / 313
22.0										1 /	5 /	13 /	83 / 12	244 / 43	428 / 79	330 / 21	119 / 6	22 /	2 /						1379 / 263
21.0										1 /	13 /	83 / 12	244 / 43	428 / 79	330 / 21	119 / 6	22 /								1254 / 163
20.0										2 /	11 /	5 /	11 /	84 / 6	89 / 2	28 / 1	5 /								745 / 66
19.0										1 /	2 /														283 / 27
18.0										1 /	2 /	8 /	19 / 4	16 / 1	8 /										59 / 7
17.0										1 /	6 /	1	2 /												12 / 1
16.0										1 /															1 /
TOTAL	4	34	137	289	380	55	720	1113	1113	1036	765	571	339	186	122	70	40	14	3	2	7	5	1	1	6682

STD ERROR

$$\text{HIP CIRC} = (1.110) \text{UPPER THIGH CIRC} + (12.87)$$

$$\text{UPPER THIGH CIRC} = (0.655) \text{HIP CIRC} + (-2.47)$$

REGRESSION EQUATIONS

R

ST DEV

MEAN

1966 ARMY MEN

HIP CIRC

UPPER THIGH CIRC

1977 ARMY WOMEN

HIP CIRC

UPPER THIGH CIRC

STD ERROR

1.29

0.99

STD ERROR

1.05

0.76

REGRESSION EQUATIONS

R

ST DEV

MEAN

1966 ARMY MEN

HIP CIRC

UPPER THIGH CIRC

1977 ARMY WOMEN

HIP CIRC

UPPER THIGH CIRC

STD ERROR

1.29

0.99

STD ERROR

1.05

0.76

REGRESSION EQUATIONS

R

ST DEV

MEAN

1966 ARMY MEN

HIP CIRC

UPPER THIGH CIRC

1977 ARMY WOMEN

HIP CIRC

UPPER THIGH CIRC

STD ERROR

1.29

0.99

STD ERROR

1.05

0.76

REGRESSION EQUATIONS

R

ST DEV

MEAN

1966 ARMY MEN

HIP CIRC

UPPER THIGH CIRC

1977 ARMY WOMEN

HIP CIRC

UPPER THIGH CIRC

STD ERROR

1.29

0.99

STD ERROR

1.05

0.76

REGRESSION EQUATIONS

R

ST DEV

MEAN

1966 ARMY MEN

HIP CIRC

UPPER THIGH CIRC

1977 ARMY WOMEN

HIP CIRC

UPPER THIGH CIRC

STD ERROR

1.29

0.99

STD ERROR

1.05

0.76

REGRESSION EQUATIONS

R

ST DEV

MEAN

1966 ARMY MEN

HIP CIRC

UPPER THIGH CIRC

1977 ARMY WOMEN

HIP CIRC

UPPER THIGH CIRC

STD ERROR

1.29

0.99

STD ERROR

1.05

0.76

REGRESSION EQUATIONS

R

ST DEV

MEAN

1966 ARMY MEN

HIP CIRC

UPPER THIGH CIRC

1977 ARMY WOMEN

HIP CIRC

UPPER THIGH CIRC

STD ERROR

1.29

0.99

STD ERROR

1.05

0.76

REGRESSION EQUATIONS

R

ST DEV

MEAN

1966 ARMY MEN

HIP CIRC

UPPER THIGH CIRC

1977 ARMY WOMEN

HIP CIRC

UPPER THIGH CIRC

STD ERROR

1.29

0.99

STD ERROR

1.05

0.76

REGRESSION EQUATIONS

R

ST DEV

MEAN

1966 ARMY MEN

HIP CIRC

UPPER THIGH CIRC

1977 ARMY WOMEN

HIP CIRC

UPPER THIGH CIRC

STD ERROR

1.29

0.99

STD ERROR

1.05

0.76

REGRESSION EQUATIONS

R

ST DEV

MEAN

1966 ARMY MEN

HIP CIRC

UPPER THIGH CIRC

1977 ARMY WOMEN

HIP CIRC

UPPER THIGH CIRC

STD ERROR

1.29

0.99

STD ERROR

1.05

0.76

REGRESSION EQUATIONS

R

ST DEV

MEAN

1966 ARMY MEN

HIP CIRC

UPPER THIGH CIRC

1977 ARMY WOMEN

HIP CIRC

UPPER THIGH CIRC

STD ERROR

1.29

0.99

STD ERROR

1.05

0.76

REGRESSION EQUATIONS

R

ST DEV

MEAN

1966 ARMY MEN

HIP CIRC

UPPER THIGH CIRC

1977 ARMY WOMEN

HIP CIRC

UPPER THIGH CIRC

STD ERROR

1.29

0.99

STD ERROR

1.05

0.76

REGRESSION EQUATIONS

R

ST DEV

MEAN

1966 ARMY MEN

HIP CIRC

UPPER THIGH CIRC

1977 ARMY WOMEN

HIP CIRC

UPPER THIGH CIRC

STD ERROR

1.29

0.99

STD ERROR

1.05

0.76

REGRESSION EQUATIONS

R

ST DEV

MEAN

1966 ARMY MEN

HIP CIRC

UPPER THIGH CIRC

1977 ARMY WOMEN

HIP CIRC

UPPER THIGH CIRC

STD ERROR

1.29

0.99

STD ERROR

1.05

0.76

REGRESSION EQUATIONS

R

ST DEV

MEAN

1966 ARMY MEN

HIP CIRC

UPPER THIGH CIRC

1977 ARMY WOMEN

HIP CIRC

UPPER THIGH CIRC

STD ERROR

1.29

0.99

STD ERROR

1.05

0.76

REGRESSION EQUATIONS

R

ST DEV

MEAN

1966 ARMY MEN

HIP CIRC

UPPER THIGH CIRC

1977 ARMY WOMEN

HIP CIRC

UPPER THIGH CIRC

STD ERROR

1.29

0.99

STD ERROR

1.05

TABLE 162

A BIVARIATE FREQUENCY TABLE FOR
HIP CIRC AND WEIGHT
1966 ARMY MEN / 1977 ARMY WOMEN

	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0	TOTAL
280.0																									1/
275.0																									1/
270.0																									3/
265.0																									1/
260.0																									1/
255.0																									4/
250.0																									1/
245.0																									7/
240.0																									8/
235.0																									11/
230.0																									13/
225.0																									21/
220.0																									43/
215.0																									57/
210.0																									71/
205.0																									96/
200.0																									121/
195.0																									161/
190.0																									200/
185.0																									245/
180.0																									313/
175.0																									378/
170.0																									434/
165.0																									562/
160.0																									680/
155.0																									630/
150.0																									531/
145.0																									518/
140.0																									393/
135.0																									287/
130.0																									186/
125.0																									95/
120.0																									28/
115.0																									22/
110.0																									10/
105.0																									3/
100.0																									1/
95.0																									1/
90.0																									1/
85.0																									1/
TOTAL	4	2	3	6	13	25	37	55	71	84	113	112	106	96	69	56	46	39	28	20	14	10	5	1	6677

1966 ARMY MEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR
 HIP CIRC 37.09 2.46 0.919 = (0.097)*WEIGHT(LB)+(21.66) 0.97
 WEIGHT 159.10 23.35 0.919 = (8.722)*HIP CIRC(IN)+(-164.41) 9.22

1977 ARMY WOMEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR
 HIP CIRC 37.59 2.48 0.903 = (0.119)*WEIGHT(LB)+(21.87) 1.06
 WEIGHT 132.11 18.76 0.903 = (6.832)*HIP CIRC(IN)+(-124.73) 8.05

TABLE 163

A BIVARIATE FREQUENCY TABLE FOR
INSTEP CIRC AND FOOT CIRC
1966 ARMY MEN / 1977 ARMY WOMEN

	7.50	8.00	8.50	9.00	9.50	10.00	10.50	11.00	11.50	12.00	12.50	13.00	13.50	14.00	14.50	TOTAL
12.50											1/					1/
12.25																
12.00											1/	2/				5/
11.75								1/	2/	2/	1/					8/
11.50								4/	13/	15/	5/	2/				39/
11.25						1/	1/	13/	31/	28/	13/	2/				89/
11.00							16/	49/	79/	53/	6/			1/		204/
10.75					5/	55/	185/	1184/	74/	17/	2/					522/ 1
10.50				1/	12/	176/	5296/	180/	58/	8/						731/ 5
10.25			3/	8/	64/	1407/	7449/	5209/	44/	6/						1190/ 13
10.00		1/	6/	17/	6192/	6438/	12357/	3125/	10/	3/						1149/ 27
9.75				1/	34/	8240/	41390/	18262/	370/	12/						999/ 70
9.50				8/	2	63/	77264/	89309/	31126/	232/	2/					805/ 201
9.25				5/	18	98/	125176/	61131/	836/	18/	3/					447/ 213
9.00						8/	50	61/	168	82/	58/	1	13/			225/ 293
8.75			3/	11	16/	132	62/	116	56/	14	34/		5/			177/ 273
8.50				1/	22	6/	101	18/	32	20/	1	2/	1/			48/ 156
8.25		1	1	15	6/	43	8/	6	7/	2/						24/ 65
8.00		3	1/	12	7/	7	6/		3/							17/ 22
7.75																1/ 1
7.50																1/
7.25																1/
TOTAL	4	8	66	366	1122	2019	1788	937	301	64	9	1		1	6682	1330

FOOT CIRC(IN)

1966 ARMY MEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
INSTEP CIRC	10.46	0.65	0.669	$= (0.744) * FOOT CIRC(IN) + (3.13)$	0.48
FOOT CIRC	9.85	0.58	0.669	$= (0.601) * INSTEP CIRC(IN) + (3.57)$	0.43
1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
INSTEP CIRC	9.24	0.50	0.780	$= (0.862) * FOOT CIRC(IN) + (1.57)$	0.31
FOOT CIRC	8.90	0.45	0.780	$= (0.705) * INSTEP CIRC(IN) + (2.38)$	0.28

TABLE 164

A BIVARIATE FREQUENCY TABLE FOR
INSTEP CIRC AND HEEL-ANKLE CIRC
1966 ARMY MEN / 1977 ARMY WOMEN

	7.50	8.00	8.50	9.00	9.50	10.00	10.50	11.00	11.50	12.00	12.50	13.00	13.50	14.00	14.50	TOTAL
16.00										1/	2/	1/				4 /
15.75								1/	3/	1/	1/	1/				8 /
15.50								1/	4/	4/	3/	2/				14 /
15.25							1/	4/	17/	19/	8/	2/		1/		52 /
15.00							3/	23/	35/	23/	9/	3/				96 /
14.75							10/	50/	69/	34/	11/					174 /
14.50						4/	45/	141/	117/	66/	11/					384 /
14.25					4/	26/	103/	189/	1158/	60/	9/					549 / 1
14.00				1/	11/	36/	206/	1232/	2172/	63/	4/					713 / 3
13.75			4/	11/	107/	2359/	6337/	3181/	28/	3/						1030 / 11
13.50			2/	19/	142/	6381/	11309/	4104/	7/							964 / 22
13.25		1/	5/	49/	4242/	25385/	17250/	245/	4/	2/						983 / 48
13.00			9/	183/	30240/	39252/	35161/	313/								758 / 108
12.75		2/	8/	175/	55153/	82155/	870/	14/								477 / 146
12.50		/	17/	1851/	8993/	5475/	414/	5/	1/							247 / 166
12.25		3/	110/	4438/	16060/	5333/	6/									150 / 258
12.00		/	412/	8716/	10318/	1010/										56 / 204
11.75		1/	84/	898/	72/	31/										14 / 172
11.50		/	254/	74/	19/	2/	1/									7 / 119
11.25		/	112/	31/	5/											2 / 49
11.00		/	2/	9/	4/											/ 15
10.75		/	1/	3/	4/											/ 8
10.50		4/	66/	353/	366/	1122/	2019/	1788/	937/	301/	64/	9/	1/			6682
TOTAL																1330

HEEL-ANKLE CIRC(IN)

1966 ARMY MEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
INSTEP CIRC	10.46	0.65	0.635	= (0.631)*HEEL-ANKLE CIRC(IN)+(1.98)	0.50
HEEL-ANKLE CIRC	13.43	0.65	0.635	= (0.639)*INSTEP CIRC(IN)+(6.75)	0.50
1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
INSTEP CIRC	9.24	0.50	0.804	= (0.698)*HEEL-ANKLE CIRC(IN)+(0.78)	0.30
HEEL-ANKLE CIRC	12.12	0.57	0.804	= (0.926)*INSTEP CIRC(IN)+(3.56)	0.34

TABLE 165

A BIVARIATE FREQUENCY TABLE FOR
PALM LENGTH AND HAND LENGTH
1966 ARMY MEN / 1977 ARMY WOMEN

PALM LENGTH(IN)														TOTAL	
3.00	3.25	3.50	3.75	4.00	4.25	4.50	4.75	5.00	5.25						
9.50									1/				1/		
9.25									3/				6/		
9.00								1/	4/				8/		
8.75						3/	15/	20/	3/				41/		
8.50						27/	70/	23/	1/				121/		
8.25					18/	190/	180/	1	26/	1/				415/ 1	
8.00				9/	214/	686/	9	180/	1	3/				1092/ 10	
7.75			4/	58/	704/	27	708/	28	34/	1	3/				1509/ 58
7.50			12/	286/	4	960/	82	332/	30	6/				1596/ 116	
7.25			73/	1	587/	128	634/	149	48/	3	1/				1343/ 281
7.00			5/	119/	20	248/	274	57/	45	1/				430/ 339	
6.75			6/	48/	145	35/	169	2/	1				91/ 315		
6.50			3/	11	17/	147	7/	18							28/ 178
6.25			1/	10	/	21							1/ 31		
6.00	/	1	/	3	/	1							/ 5		
5.75	1	16	24	335	593	304	70	497	82	12	6682			1330	
TOTAL	1	16	24	335	593	304	70	497	82	12	6682			1330	

HAND LENGTH(IN)

1966 ARMY MEN

PALM LENGTH

HAND LENGTH

MEAN

4.17

ST DEV

0.25

R

0.822

REGRESSION EQUATIONS

= (0.537)*HAND LENGTH(IN)+(0.15)

STD ERROR

0.14

STD ERROR

0.22

REGRESSION EQUATIONS

= (1.260)*PALM LENGTH(IN)+(2.24)

STD ERROR

0.09

STD ERROR

0.15

1977 ARMY WOMEN

PALM LENGTH

HAND LENGTH

MEAN

3.89

ST DEV

0.21

R

0.908

REGRESSION EQUATIONS

= (0.526)*HAND LENGTH(IN)+(0.28)

STD ERROR

0.09

STD ERROR

0.15

REGRESSION EQUATIONS

= (1.567)*PALM LENGTH(IN)+(0.77)

STD ERROR

0.09

STD ERROR

0.15

TABLE 166

A BIVARIATE FREQUENCY TABLE FOR
SHOULDER CIRC AND WEIGHT
1966 ARMY MEN / 1977 ARMY WOMEN

WEIGHT (LB)	SHOULDER CIRC (IN)																				TOTAL					
	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0		53.0	54.0	55.0	56.0	57.0
260.0																										17
275.0																										37
270.0																										17
265.0																										47
260.0																										17
255.0																										77
250.0																										17
245.0																										87
240.0																										117
235.0																										187
230.0																										217
225.0																										437
220.0																										577
215.0																										717
210.0																										857
205.0																										997
200.0																										1217
195.0																										1357
190.0																										1497
185.0																										1637
180.0																										1777
175.0																										1917
170.0																										2057
165.0																										2197
160.0																										2337
155.0																										2477
150.0																										2617
145.0																										2757
140.0																										2897
135.0																										3037
130.0																										3177
125.0																										3317
120.0																										3457
115.0																										3597
110.0																										3737
105.0																										3877
100.0																										4017
95.0																										4157
90.0																										4297
85.0																										4437
80.0																										4577
75.0																										4717
70.0																										4857
65.0																										4997
60.0																										5137
55.0														</												

1966 ARMY MEN
SHOULDER CIRC
WEIGHT
MEAN 44.55
ST DEV 2.51
R 0.844
REGRESSION EQUATIONS
 $\text{SHOULDER CIRC} = (0.091) \times \text{WEIGHT} + (30.08)$
 $\text{WEIGHT} = (7.838) \times \text{SHOULDER CIRC} + (-190.11)$
STD ERROR 1.35
12.52

1977 ARMY WOMEN
SHOULDER CIRC
WEIGHT
MEAN 39.51
ST DEV 2.11
R 0.833
REGRESSION EQUATIONS
 $\text{SHOULDER CIRC} = (0.094) \times \text{WEIGHT} + (27.09)$
 $\text{WEIGHT} = (7.414) \times \text{SHOULDER CIRC} + (-160.82)$
STD ERROR 1.17
10.38

TABLE 167

A BIVARIATE FREQUENCY TABLE FOR
STATURE AND BUST/CHEST CIRC
1966 ARMY MEN / 1977 ARMY WOMEN

	55.0	57.0	59.0	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0	TOTAL
49.0																									4/
48.0																									13/
47.0																									11/
46.0																									22/
45.0																									33/
44.0																									70/
43.0																									130/
42.0																									186/
41.0																									338/
40.0																									518/
39.0																									712/
38.0																									911/
37.0																									1082/
36.0																									1111/
35.0																									1111/
34.0																									1111/
33.0																									1111/
32.0																									1111/
31.0																									1111/
30.0																									1111/
29.0																									1111/
28.0																									1111/
TOTAL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1399

1966 ARMY MEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
STATURE	68.71	2.60	0.245	$= (0.242) \times \text{BUST/CHEST CIRC} + (59.77)$	2.52
BUST/CHEST CIRC	36.92	2.63	0.245	$= (0.248) \times \text{STATURE} + (19.88)$	2.56
1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
STATURE	64.16	2.57	0.239	$= (0.246) \times \text{BUST/CHEST CIRC} + (55.61)$	2.49
BUST/CHEST CIRC	34.72	2.49	0.239	$= (0.232) \times \text{STATURE} + (19.83)$	2.42

TABLE 168

A BIVARIATE FREQUENCY TABLE FOR
STATURE AND HIP BREADTH
1966 ARMY MEN / 1977 ARMY WOMEN

HIP BREADTH (IN)	STATURE (IN)																										TOTAL
	56.0	57.0	58.0	59.0	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0		
19.0																										1	
18.5																										1	
18.0																										1	
17.5																										1	
17.0																										1	
16.5																										1	
16.0																										1	
15.5																										1	
15.0																										1	
14.5																										1	
14.0																										1	
13.5																										1	
13.0																										1	
12.5																										1	
12.0																										1	
11.5																										1	
11.0																										1	
10.5																										1	
TOTAL	1	7	18	35	90	32	122	58	135	235	476	761	970	1043	937	773	544	372	199	67	39	11	9	1	9092	1298	

1966 ARMY MEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
STATURE	68.71	2.60	0.437	$= (1.440) \cdot \text{HIP BREADTH (IN)} + (49.89)$	2.34
HIP BREADTH	13.07	0.79	0.437	$= (0.133) \cdot \text{STATURE (IN)} + (3.93)$	0.71
1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
STATURE	64.15	2.57	0.398	$= (1.059) \cdot \text{HIP BREADTH (IN)} + (49.41)$	2.35
HIP BREADTH	13.92	0.96	0.398	$= (0.149) \cdot \text{STATURE (IN)} + (4.36)$	0.88

TABLE 169

A BIVARIATE FREQUENCY TABLE FOR
STATURE AND HIP CIRC
1966 ARMY MEN / 1977 ARMY WOMEN

	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	TOTAL
STATURE (IN)	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	TOTAL
1966 ARMY MEN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1977 ARMY WOMEN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MEAN	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	68.71
ST DEV	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.46
R	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350
REGRESSION EQUATIONS	$HIP\ CIRC(IN) = (0.370) * STATURE(IN) + (54.98)$																									
STD ERROR	2.44																									
1966 ARMY MEN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1977 ARMY WOMEN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MEAN	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	64.15
ST DEV	2.57	2.57	2.57	2.57	2.57	2.57	2.57	2.57	2.57	2.57	2.57	2.57	2.57	2.57	2.57	2.57	2.57	2.57	2.57	2.57	2.57	2.57	2.57	2.57	2.57	2.57
R	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414
REGRESSION EQUATIONS	$HIP\ CIRC(IN) = (0.429) * STATURE(IN) + (48.03)$																									
STD ERROR	2.34																									
1966 ARMY MEN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1977 ARMY WOMEN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MEAN	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	37.59
ST DEV	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48
R	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414
REGRESSION EQUATIONS	$HIP\ CIRC(IN) = (0.400) * STATURE(IN) + (11.93)$																									
STD ERROR	2.26																									

TABLE 170

A BIVARIATE FREQUENCY TABLE FOR
STATURE AND SHOULDER CIRC
1966 ARMY MEN / 1977 ARMY WOMEN

	56.0	57.0	58.0	59.0	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	TOTAL
56.0																									
57.0																									
58.0																									
59.0																									
60.0																									
61.0																									
62.0																									
63.0																									
64.0																									
65.0																									
66.0																									
67.0																									
68.0																									
69.0																									
70.0																									
71.0																									
72.0																									
73.0																									
74.0																									
75.0																									
76.0																									
77.0																									
78.0																									
79.0																									
TOTAL	7	18	1	35	9	32	123	198	135	235	475	751	115	870	943	937	544	372	193	97	39	11	9	1	6082

1966 ARMY MEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

STATURE 68.71 2.60 0.297 = (0.308)*SHOULDER CIRC(N)+(54.98) 2.48

SHOULDER CIRC 44.55 2.51 0.297 = (0.287)*STATURE(N)+(24.83) 2.40

1977 ARMY WOMEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

STATURE 64.16 2.57 0.331 = (0.404)*SHOULDER CIRC(N)+(48.19) 2.42

SHOULDER CIRC 39.51 2.11 0.331 = (0.272)*STATURE(N)+(22.06) 1.99

TABLE 171

A BIVARIATE FREQUENCY TABLE FOR
STATURE AND SLEEVE INSEAM
1966 ARMY MEN / 1977 ARMY WOMEN

	56.0	57.0	58.0	59.0	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0	72.0	73.0	74.0	75.0	76.0	77.0	78.0	TOTAL
24.0																								1/
23.5																								2/
23.0																								8/
22.5																								25/
22.0																								60/
21.5																								168/
21.0																								282/
20.5																								17/
20.0																								1064/
19.5																								34
19.0																								1228/
18.5																								156
18.0																								789/
17.5																								190
17.0																								555/
16.5																								292/
16.0																								247
15.5																								99/
15.0																								168
14.5																								25/
14.0																								109
TOTAL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6682

1966 ARMY MEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

STATURE 68.71 2.60 0.732 = (1.806)*SLEEVE INSEAM(IN) + (34.16) 1.77

SLEEVE INSEAM 19.13 1.05 0.732 = (0.296)*STATURE(IN) + (-1.21) 0.72

1977 ARMY WOMEN MEAN ST DEV R REGRESSION EQUATIONS STD ERROR

STATURE 64.15 2.57 0.746 = (1.860)*SLEEVE INSEAM(IN) + (31.16) 1.71

SLEEVE INSEAM 17.74 1.03 0.746 = (0.299)*STATURE(IN) + (-1.44) 0.69

A BIVARIATE FREQUENCY TABLE FOR
STATURE AND UPPER THIGH CIRC
1966 ARMY MEN / 1977 ARMY WOMEN

	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
1966 ARMY MEN					
STATURE	68.71	2.60	0.219	= (0.302)*UPPER THIGH CIRC(IN)-(62.12)	2.54
UPPER THIGH CIRC	21.82	1.89	0.219	= (0.159)*STATURE(IN)+(10.90)	1.84
1977 ARMY WOMEN					
STATURE	64.15	2.57	0.287	= (0.411)*UPPER THIGH CIRC(IN)+(54.95)	2.46
UPPER THIGH CIRC	22.40	1.79	0.287	= (0.200)*STATURE(IN)+(9.57)	1.72

TABLE 173

A BIVARIATE FREQUENCY TABLE FOR
STATURE AND WEIGHT
1966 ARMY MEN / 1977 ARMY WOMEN

	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	TOTAL
280.0																										1/
275.0																										3/
270.0																										1/
265.0																										4/
260.0																										1/
255.0																										7/
250.0																										9/
245.0																										11/
240.0																										13/
235.0																										21/
230.0																										43/
225.0																										57/
220.0																										71/
215.0																										89/
210.0																										121/
205.0																										151/
200.0																										200/
195.0																										245/
190.0																										312/
185.0																										378/
180.0																										434/
175.0																										552/
170.0																										584/
165.0																										630/
160.0																										630/
155.0																										531/
150.0																										518/
145.0																										363/
140.0																										297/
135.0																										195/
130.0																										185/
125.0																										105/
120.0																										84/
115.0																										54/
110.0																										27/
105.0																										10/
100.0																										3/
95.0																										1/
90.0																										1/
85.0																										1/
TOTAL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1390

1966 ARMY MEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
STATURE	68.71	2.60	0.489	$= (0.054) \times \text{WEIGHT(LB)} + (-60.12)$	2.27
WEIGHT	159.10	23.35	0.489	$= (4.388) \times \text{STATURE(IN)} + (-142.39)$	20.37
1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
STATURE	64.15	2.57	0.536	$= (0.073) \times \text{WEIGHT(LB)} + (-54.51)$	2.17
WEIGHT	132.11	18.76	0.536	$= (3.916) \times \text{STATURE(IN)} + (-119.12)$	15.84

TABLE 174

A BIVARIATE FREQUENCY TABLE FOR
UPPER THIGH CIRC AND WEIGHT
1966 ARMY MEN / 1977 ARMY WOMEN

UPPER THIGH CIRC(IN)																		
15.0	16.0	17.0	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0	27.0	28.0	29.0	30.0	31.0	TOTAL	
280.0														1/			1/	
275.0																		
270.0										1/	1/			1/			3/	
265.0												1/					1/	
260.0											2/	1/		1/			4/	
255.0														1/			1/	
250.0												1/	2/				7/	
245.0								1/	2/	2/	2/	2/	1/				9/	
240.0								1/	2/	2/	3/	3/	2/				11/	
235.0								1/	3/	4/	4/	6/	1/				19/	
230.0									2/	6/	4/	1/					13/	
225.0								1/	3/	11/	3/	1/	1/				21/	
220.0								2/	2/	20/	10/	1/	1/	1			43/	
215.0					1/			4/	2/	14/	15/	17/	2/	1/			57/	
210.0								3/	9/	25/	18/	12/	1				71/	
205.0							2/	2/	16/	31/	33/	13/	1/	1			98/	
200.0							1/	7/	32/	42/	28/	8/	1				121/	
195.0					2/			19/	46/	53/	27/	12/	1	3	1		161/	
190.0					3/	6/		35/	59/	73/	23/	1/					200/	
185.0					1/			51/	100/	66/	15/	1	3/	1	4	1	245/	
180.0					4/	23/		88/	1114/	170/	13/	2	1/	6			313/	
175.0					9/	42/		134/	133/	150/	1	9/	2	4	4	1	378/	
170.0			1/		1/	100/		179/	1102/	130/	6	1	3/	4	1		434/	
165.0					5/	47/		164/	1214/	1102/	4	17/	11	3/	8		582/	
160.0			2/		8/	93/		226/	2194/	361/	8	7/	25	17	1	2	684/	
155.0			2/		29/	171/		258/	1191/	728/	24	1/	7	1			680/	
150.0			2/		6/	58/		242/	220/	87/	19	14/	48	1/	24	4	630/	
145.0			4/		10/	89/		218/	176/	532/	26	2/	55	25	1	3	531/	
140.0			2/		25/	154/		218/	104/	1714/	51	1/	58	1	10		518/	
135.0			1/		4/	50/		150/	125/	230/	32	3/	74	1	25	9	363/	
130.0			1/		4/	57/		136/	59/	910/	49	1	17	1	1		267/	
125.0			13/		58/	80/		127/	306/	74	2/	45	1	6	1		186/	
120.0			2/		13/	41/		27/	611/	30	1	39	1	16	3		95/	
115.0			6/		16/	5/		5/	1164/	1	24	1	6				26/	
110.0			2/		6/	11/		33/	231/	27	1	8	1				22/	
105.0			5/		2/	3/		91/	271/	8							10/	
100.0			1/		1/	4		71/	161/	1							3/	
95.0			1/		2/	1		2/	1								11/	
90.0			1		12	59	7	282	747	1253	1377	1262	816	495	232	48	5677	
TOTAL																	1330	

1966 ARMY MEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
UPPER THIGH CIRC	21.82	1.89	0.857	= (0.069)*WEIGHT(LB)+(10.84)	0.97
WEIGHT	159.10	23.35	0.857	= (10.598)*UPPER THIGH CIRC(IN)+(-72.16)	12.03
1977 ARMY WOMEN	MEAN	ST DEV	R	REGRESSION EQUATIONS	STD ERROR
UPPER THIGH CIRC	22.40	1.79	0.883	= (0.084)*WEIGHT(LB)+(11.30)	0.84
WEIGHT	132.11	18.76	0.883	= (9.243)*UPPER THIGH CIRC(IN)+(-74.95)	8.82

APPENDIX

MEASUREMENT DESCRIPTIONS

ANKLE CIRCUMFERENCE

WOMEN: the minimum circumference of the ankle.

MEN: same.

ANKLE HEIGHT

WOMEN: the height of the level of minimum circumference of the ankle.

MEN: not measured.

BICEPS CIRCUMFERENCE FLEXED

WOMEN: the circumference of the arm at the level of the maximum protrusion of the biceps, measured with the elbow flexed 90°, the upper arm horizontal and the fist tightly clenched.

MEN: same.

BUST/CHEST CIRCUMFERENCE

WOMEN: the horizontal circumference of the trunk, measured with the tape passing over the bra points.

MEN: the horizontal circumference of the trunk, measured with the tape passing over the nipples.

CROTCH HEIGHT

WOMEN: the vertical distance from floor to mid-point of crotch.

MEN: same.

CROTCH LENGTH

WOMEN: the surface distance from the waist directly above buttock protrusion, over the protrusion, and through the crotch to waist level in the midsagittal plane.

MEN: not measured.

FOOT BREADTH

WOMEN: the maximum breadth of the foot as measured at right angles to its long axis.

MEN: same.

FOOT CIRCUMFERENCE

WOMEN: the circumference of the foot measured around the distal ends of the protrusions of the metatarsal bones (the widest part of the foot).

MEN: same.

FOOT LENGTH

WOMEN: the length of the foot measured parallel to its long axis.

MEN: same.

HAND BREADTH

WOMEN: the distance between the distal ends of the metacarpal bones.

MEN: same.

HAND CIRCUMFERENCE

WOMEN: the circumference measured around the metacarpal-phalangeal joints.

MEN: same.

HAND LENGTH

WOMEN: the distance from the wrist crease to the tip of the middle finger, measured parallel to the long axis of the hand.

MEN: same.

HEAD BREADTH

WOMEN: the maximum breadth of the head above the level of the ears.

MEN: same.

HEAD CIRCUMFERENCE

WOMEN: the maximum circumference of the head measured above the brow ridges.

MEN: same.

HEAD LENGTH

WOMEN: the maximum length of the head measured from the most protruding point between the brow ridges to the back of the head (occiput).

MEN: same.

HEEL BREADTH

WOMEN: the maximum breadth of the heel.

MEN: same.

HEEL-ANKLE CIRCUMFERENCE

WOMEN: the diagonal circumference of the foot measured with the tape passing under the tip of the heel and over the instep at the foot-leg junction.

MEN: same.

HIP BREADTH

WOMEN: the maximum horizontal breadth of the hips.

MEN: same.

HIP CIRCUMFERENCE

WOMEN: the maximum circumference of the hips at the level of the maximum posterior protrusion of the buttocks.

MEN: same.

INSTEP CIRCUMFERENCE

WOMEN: the circumference of the foot at the level of the metatarsal-cuneiform joint measured perpendicular to the long axis of the foot.

MEN: same.

INSTEP LENGTH

WOMEN: the distance from the level of the heel to the point of maximum horizontal protrusion of the foot, measured parallel to the long axis of the foot.

MEN: same.

INTERSCYE BACK

WOMEN: the surface distance across the back between points located midway between the upper ends of the armpit creases and the tips of the shoulders.

MEN: the surface distance across the back between the upper ends of the armpit creases.

NECK CIRCUMFERENCE

WOMEN: the circumference of the base of the neck; this circumference is not in a plane perpendicular to the axis of the neck.

MEN: the circumference of the neck measured just below the "Adam's Apple"; this circumference is measured on a plane slightly higher and closer to the perpendicular with regard to the neck axis than is the corresponding women's measurement.

PALM LENGTH

WOMEN: the distance from the wrist crease to the skin crease at the base of the third finger measured parallel to the long axis of the hand.

MEN: same.

SCYE CIRCUMFERENCE

WOMEN: the circumference of the scye (armhole) measured with the tape passing through the armpit and over the tip of the shoulder.

MEN: same.

SHOULDER CIRCUMFERENCE

WOMEN: the horizontal circumference of the shoulders at the level of the greatest lateral protrusion of the deltoid muscles.

MEN: same.

SHOULDER LENGTH

WOMEN: the surface distance from the neck-shoulder junction on the side of the neck to the tip of the shoulder.

MEN: same.

SLEEVE INSEAM

WOMEN: the distance from the front edge of the armpit to the little finger side of the wrist measured with the arm held slightly away from the body, palm forward and the tape tense.

MEN: same.

SLEEVE LENGTH

WOMEN: not measured.

MEN: subject stands erect with his arms held horizontally and bent at the elbows, fists pressed together in front of him. Sleeve length is the horizontal distance along the outer surface of the right arm from the middle of the back, over the elbow, to the center of the bony prominence at the outer edge of the wrist.

SLEEVE OUTSEAM

WOMEN: the distance from the tip of the shoulder to the thumb side of the wrist with the arm held slightly away from the body, palm forward and the tape tense.

MEN: not measured.

SPHYRION HEIGHT

WOMEN: the height of the most distal extension of the tibia (the bottom of the ankle bone) on the inside of the foot.

MEN: not measured.

STATURE

WOMEN: the vertical distance from floor to the top of the head.

MEN: same.

UPPER THIGH CIRCUMFERENCE

WOMEN: the circumference of the leg measured at the level of the lowest point of the gluteal furrow (point at which the buttock meets the thigh).

MEN: same.

VERTICAL TRUNK CIRCUMFERENCE

WOMEN: the circumference of the torso measured with the tape passing through the crotch, over the protrusion of the buttock, the midshoulder point and the tip of the bra. The tape follows the contour of the body's back but not its front below the bustpoint.

MEN: measured the same except that the tape generally follows the contours of the body's back and front.

WAIST BACK

WOMEN: the surface distance from the "natural" waist to the seventh cervical vertebra (approximately at the base of the neck).

MEN: the surface distance from the waist (at the level of the navel) to the seventh cervical vertebra (approximately at the base of the neck).

WAIST CIRCUMFERENCE

WOMEN: the horizontal circumference of the waist at "natural" waist level.

MEN: the maximum horizontal circumference of the waist measured at the level of the navel.

WAIST FRONT

WOMEN: the surface distance from the "natural" waist to the neck-torso junction on the front of the body.

MEN: not measured.

WAIST HEIGHT

WOMEN: the vertical distance from the floor to the "natural" waist level.

MEN: the vertical distance from the floor to the upper edge of the right hip bone.

WEIGHT

WOMEN: the weight of the subject wearing underwear.

MEN: same.

WRIST CIRCUMFERENCE

WOMEN: the circumference of the wrist at stylium (wrist bone on the thumb side of the hand).

MEN: same.

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Bust/Chest Circumference	112	113	-
Stature	130	131	-
Waist Circumference with:			
Ankle Circumference	104	105	-
Bust/Chest Circumference	114	115	-
Crotch Height	118	119	-
Crotch Length	-	149	-
Hip Circumference	122	123	-
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Upper Thigh Circumference	136	137	-
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